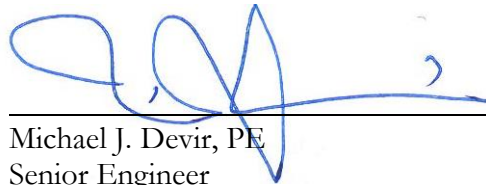



REMEDIATION COST ESTIMATE
WABASH CARBON CAPTURE SEQUESTRATION PROJECT
WABASH CARBON SERVICES
444 W. SANDFORD AVENUE, WEST TERRE HAUTE, INDIANA
KERAMIDA PROJECT NO. 19627

Prepared for: **WABASH VALLEY RESOURCES**
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December 29, 2020

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**REMEDATION COST ESTIMATE
WABASH CCS PROJECT, WABASH CARBON SERVICES
444 W. SANDFORD AVENUE, WEST TERRE HAUTE, INDIANA
KERAMIDA PROJECT NO. 19627**

1.0 INTRODUCTION

KERAMIDA Inc. (KERAMIDA) has prepared this Remediation Cost Estimate for Wabash Carbon Services (WCS) and the planned Wabash Carbon Capture Sequestration (CCS) Project. The CCS project is a component of the planned Carbon Capture and Carbon Free Hydrogen Production plant to be constructed in West Terre Haute, Indiana.

This remediation estimate is part of the requirements of the U.S. Environmental Protection Agency (EPA) Underground Injection Control (UIC) Program for Carbon Dioxide (CO₂) Geologic Sequestration, referred to as the Class VI Rule, and Class VI Injection Wells. The Class VI Rule requires owners or operators of Class VI wells to perform specific activities over the lifetime of the project to ensure the integrity of the injection well, that fluid migration and pressures are within permit limits, and that underground sources of drinking water (USDWs) are not endangered. The specific activities include monitoring of groundwater quality above the confining zone, tracking of the carbon dioxide plume and associated pressure front, plus other specific monitoring and testing requirements, and additional monitoring deemed necessary by the UIC Program Director. A component of the Class VI Rule is demonstrating and maintaining financial responsibility for corrective action on wells in the Area of Review (AoR), injection well plugging, post-injection site care (PISC), site closure, and emergency and remedial response (40 CFR 146.85). This remediation estimate is a component of the financial responsibility demonstration.

2.0 COMPANY QUALIFICATIONS

KERAMIDA, founded in 1988, is an engineering and consulting firm specializing in comprehensive, innovative and cost-effective solutions for our clients. KERAMIDA provides a full range of environmental engineering, compliance and management, investigations/remediation, sustainability, health and safety, energy, training, and ISO 14001/ISO 45001 services. KERAMIDA supports clients nationwide and abroad. KERAMIDA's clients include Fortune 500 companies, industry, utilities, government agencies, cities and counties, schools, financial institutions, insurance companies, developers and law firms. KERAMIDA distinguishes itself by retaining a sizable number of highly experienced, nationally known experts in all practice areas in which the firm is engaged.

KERAMIDA is certified by the Women's Business Enterprise National Council (WBENC) as a Women's Business Enterprise (WBE) and Women Owned Small Business (WOSB).

3.0 PROJECT DESCRIPTION

The WCS CCS project is a component of the Carbon Capture and Carbon Free Hydrogen Production plant planned for construction in West Terre Haute, Indiana. The goal of the CCS project is to safely inject industrial-scale volumes of CO₂ for permanent geologic sequestration to reduce atmospheric concentrations of CO₂. The CO₂ is to be compressed to a super-critical fluid, and using safe and proven pipeline technology, the CO₂ will be transported to the injection well locations and stored deep underground. A robust program has been developed for the WCS project based on the experience gained through the Carbon Storage Assurance Facility Enterprise (CarbonSAFE) program. The knowledge and experience gained through CarbonSAFE provides a high level of confidence that the underground storage unit (Potosi) is capable to accept and permanently retain the injectate. The project is envisioned to store 20 Million tons (Mt) of CO₂ over the planned 12 years of injection operation (1.65 Mt/year of CO₂ injection).

WCS is preparing a Class VI Well Permit application(s) for submittal to EPA Region V for two CO₂ injection wells proposed in the counties of Vigo and Vermillion, Indiana. The location of the injection wells are seven miles to the north-northwest (WCCCS#1), and three and a half miles to the northwest (WVCCS#2) from the carbon free hydrogen plant in West Terre Haute. The location of the injection wells and the cproduction facility are provided in Attachment 1. The permit application includes development of specific plans that describe how the requirements of the Class VI Rule will be met. A primary goal of the plans are to demonstrate that project activities are protective of human health and the environment.

Two vertical injection wells will penetrate approximately 4,800 feet vertically into the Potosi Dolomite (Potosi) formation which consists of fine- to medium-grained dolomite and a few thin interbeds of shale or siltstone. In the location of the injection wells streaky, four feet thick bands exist where the CO₂ will be sequestered. WCS will additionally drill two dual-zone monitoring wells (CM #1/#2), with one near each injection well. The dual zone monitoring wells will extend into the St. Peter Sandstone formation (approximately 3,326 feet), overlying the Everton Dolomite formation (approximately 3,354 feet), with casing penetrations also created in the Silurian formation. The Silurian formation is considered the lowest USDW and located from 1,965 to 2,386 feet (approximately). The Silurian formation lies over the Maquoketa caprock formation (approximately 2,386 feet). Well packers will be used to isolate the water in each of the formations.

In addition to the injection wells, two plume front monitoring wells (FM #1/#2) will be drilled into the Potosi formation and located near the CO₂ plume limit of each injection well. Based on modeling results, the CO₂ plume at each injection well is estimated at a radius of 2.3 miles following the 12-year operation period. The plume limits for each injection well are depicted in Attachment 1.

The project plans include periodic monitoring of groundwater (chemical analysis) in each of the installed deep monitoring wells, and several shallow aquifer monitoring wells. An estimated ten shallow monitoring wells are planned in the upper 100 feet where most drinking water wells are located proximate to the injection wells. The shallow monitoring wells will be installed in the upper portion of the Pennsylvania formation. The shallow wells will be sampled on a quarterly basis and the deep wells on an annual basis as part of the CCS project.

4.0 BASIS USED TO DEVELOP COST ESTIMATE

The parameters for the emergency and remedial response scenario for the Wabash CCS Project are based on Table 1 of: *Remediation of possible leakage from geologic CO₂ storage reservoirs into groundwater aquifers, by Ariel Esposito and Sally M. Benson, Stanford University Department of Energy Resources Engineering, Energy Procedia 4 (2011), pages 3216 to 3223, published by Elsevier Ltd.* A copy of Table 1 is provided below which is based on a storage volume of 100 MT of CO₂. The Wabash CCS project is envisioned to store 20 Mt of CO₂.

Table 1. Five Leakage Case Parameters

| Case | Leakage Rate (kg/s) | Leakage Rate (tons/year) | Total Leakage Quantity (tons) | % of Total Stored |
|--------|---------------------|--------------------------|-------------------------------|-------------------|
| Case 1 | 0.006342 | 200 | 1,000 | 0.001% |
| Case 2 | 0.015855 | 500 | 2,500 | 0.0025% |
| Case 3 | 0.03171 | 1,000 | 5,000 | 0.005% |
| Case 4 | 0.06342 | 2,000 | 10,000 | 0.01% |
| Case 5 | 0.3171 | 10,000 | 50,000 | 0.05% |

Note: Table 1 from Esposito, 2011.

The Wabash CCS remedial scenario is based on the following:

- A leakage rate of CO₂ of 2,000 tons/year
- Leakage duration period of 5 years
- Total leakage quantity of 10,000 tons for remediation

The leakage rate is based on Case 4, and total leakage quantity using with the worst-case scenario of .05% of total storage volume (Case 5). The CO₂ leakage plume is assumed to be a radius of 225 meters, and identical to Case 4 (Figure 3, Esposito paper). The parameters for the remedial scenario were determined by WCS, and provided to KERAMIDA to conduct the third-party cost estimate as part of the financial responsibility activities.

KERAMIDA for their estimation of costs utilized a combination of information and guidance sources including: 1) EPA's UIC Program Class VI Financial Responsibility Guidance; 2) historic price data from other projects the company has managed; 3) cost quotes from third party companies; 4) EPA's Geologic CO₂ Sequestration Technology and Cost Analysis document; and 4) professional judgement of the senior engineering and geologists preparing the estimate. The estimated costs are in current

(2020) dollars and reflect the costs of a third party to complete the work. The unit costs are fully loaded and include general and administrative costs, and overhead and profit.

In developing the remediation estimate, it was assumed the costs would be incurred if WCS was no longer involved in the project and a third party was asked to complete the remedial activities in a manner to protect the USDWs. Thus, the costs included in this estimate cover the efforts required to ensure protection of the USDWs at no cost to the public. The cost estimate includes the assumption that the third party would not take over operation of the WCS CCS project and that CO₂ injection would cease immediately in area of remediation. The remediation estimate does not include abandonment of the injection well or the associated injection infrastructure.

5.0 EMERGENCY AND REMEDIAL RESPONSE COST ESTIMATE

It is assumed the response to the discovered CO₂ leak(s), would be to plug leaks were possible, assess any impacts to the USDWs, and remediate any contamination of USDWs. Potential consequences and response actions are based on the methods outlined in the 2011 Esposito paper. The anticipated conditions which require remediation are described in Table 2 below.

Table 2 – Emergency and Remedial Response Events
Post-Injection USDW Contamination

| Event | Consequence | Response Action |
|---|---|---|
| Acidification due to CO ₂ migration | Decrease of pH by 1 to 2 units, mobilization of trace and alkali metals, other geochemical changes resulting in USDW exceeding applicable standards | Hydrogeological study to delineate CO ₂ plume in USDW. Groundwater extraction with treatment coupled with injection of 'clean' water. |
| Toxic metal dissolution and mobilization | Concentration of toxic metals in USDW exceeding applicable standards | Hydrogeological study to delineate CO ₂ plume in USDW. Groundwater extraction with treatment coupled with injection of 'clean' water. |
| Displacement of groundwater with brine due to CO ₂ injection | Concentrations of anions / cations in USDW exceeding applicable standards | Hydrogeological study to delineate CO ₂ plume in USDW. Groundwater extraction with treatment coupled with injection of 'clean' water. |

The remediation estimate assumes a CO₂ leakage plume with a radius of 225 meters (approximately 750 feet) or an affected area of approximately 40 acres. The CO₂ leakage plume is assumed to be above the Maquoketa caprock formation within the lowest USDW (Silurian formation) at a depth of approximately 2,400 feet. The CO₂ leakage plume is assumed to be 100 meters in height; similar to

parameters of Figure 3 - Case 4 (Esposito, 2011).

5.1 Remediation Approach

The remediation cost estimate is based on a remediation approach using a combination of injection and extraction wells (Section 4.4, Esposito, 2011). The goal of remediation being removal of CO₂ from the aquifer. Initially, the CO₂ leakage plume is displaced away from the leakage site by the injection of clean water into the targeted depth range, forming a donut shaped plume with an outer radius dependent on the flow rate and duration of the injection. Following the injection period, four extraction wells are added around the interior edge of the donut shaped plume. The wells are screened across the target depths and operate for a period of two years. The extraction wells pull the donut shaped plume back towards the plume center. The remediation estimate includes the following:

- Installation and sampling of ten monitoring wells (2400 feet depth) to delineate the CO₂ leakage plume
- Conversion of one monitoring well (deep) into a water injection well
- Installation and operation (80 days) of four shallow water wells for injection water
- Installation and operation (80 days) of a water injection system (250 gallons per minute [gpm])
- Installation and operation (2 years) of four extraction wells (10 gpm/well)
- Installation and treatment of 40 gpm of groundwater for 2 years using absorption
- Removal of installed equipment and wells following remediation (within 3 years of install)

The remediation parameters of: injection flow rate, injection duration, extraction well spacing (100 meters), extraction well flow rate, and extraction duration were defined by WCS, based on remedial approaches outlined by others for Class VI wells, and previous remediation experience.

**Table 3 – Injection & Extraction Assessment
Post-Injection USDW Contamination**

| REMEDATION SCENARIO (USDW CONTAMINATION) | | |
|---|---------------|--------------|
| Injection & Extraction (Donut Approach) | | |
| Item Description | Units | Total |
| Flow Evaluation - Pumping Duration/Pore Volumes | | |
| Injection Well Operation (240 gpm - 1 well, 80 days) | Total Gallons | 27,648,000 |
| Extraction System Operation (40 GPM - 4 wells, 2 years operation) | Total Gallons | 42,048,000 |
| | Vol. Ratio | 1.5 |

**Table 4 – Remediation Cost Estimate
Post-Injection USDW Contamination**

| Item Description | TOTAL | Notes |
|---|---------------------|--|
| Planning & Permitting | \$ 798,000 | |
| Leak Investigation/Hydrogeological Study | \$ 1,994,200 | 10 wells install & sample |
| REMEDATION SCENARIO (USDW CONTAMINATION) | | |
| Well Installation & Modifications | \$ 1,126,025 | 4 Extraction Wells install, injection well convert |
| Extraction Pumps - 10 gpm/well, 2400 ft, 40 gpm total | \$ 819,700 | 4 Ext. pumps install and electric |
| Injection Water Source | \$ 307,200 | 4 water wells w/ pumps; inj. pump and electric install |
| Extraction Fluid Treatment (40 GPM, Adsorption -2 YRS) | \$ 245,970 | Treatment system & media change outs |
| Site Improvements - Office/Treatment Bldgs | \$ 774,850 | Elec Svc, treatment trailer, office trailer, fencing |
| Excavation Work - Remediation System Install | \$ 131,560 | Trenching to wells for water and elec. Piping |
| Operation, Maintenance, Monitoring of Remed. System | \$ 1,353,158 | 2.25 years of O&M |
| System Decommissioning - Site Restoration | \$ 265,000 | removal |
| Total | \$ 7,815,663 | |
| Total with 20% Contingency | \$ 9,378,795 | |
| Notes: Remediation to Address Items 1 to 3 below: | | |
| Item 1 - Acidification Due to CO2 Migration, Decrease in pH of 1 to 2 Units - USDW Stds. Exceed | | |
| Item 2 - Toxic Metal Dissolution and Mobilization, Exceedance of USDW Standards | | |
| Item 3 - Displacement of GW with Brine due to CO2 Injection, Anion/cations exceed USDW Stds. | | |

The estimated costs of study, reporting, and well installation have been derived from multiple sources including: previous experience, EPA guidance documents, and solicited third party quotations. A detailed breakdown of items and costs summarized above is provided in Attachment 2. The supporting quotations from solicited third parties and other supporting cost documentation is provided in Attachment 3.

Based on the rural and limited municipal infrastructure in the area of the injection wells, costs assume that shallow aquifer pumping wells will be required as the source for the ‘clean’ water injection. It has been further assumed that the treated extraction water (removal of heavy metals) will be discharged to a drainage ditch or surface water feature under a National Pollution Discharge Elimination System permit. Costs for municipal water hook-up are not included, as this scenario is deemed to be extremely unlikely. It should also be noted that treatment costs can vary significantly depending on the specific metal and concentration to be treated.

6.0 SUMMARY

This remediation estimate was prepared as part of the requirements of the EPA UIC Program for CO₂ Geologic Sequestration (Class VI Rule) for Class VI Injection Wells, and a component of the financial responsibility demonstration for the WCS CCS project planned in West Terre Haute, Indiana.

The estimate was developed using the potential consequences and response actions as outlined in the paper by Esposito (Esposito, 2011). The remediation scenario, parameters, and remediation approach were determined by WCS and developed by KERAMIDA using engineering judgement. The remediation scenario was the leakage of 2,000 lbs of CO₂ over a 5-year period into the lowest USDW. The remediation estimate included a hydrogeological investigation to delineate the leakage plume which extends over a 40-acre area. The selected remedial approach was a combination of groundwater extraction and ‘clean’ water injection performed over a period of 2.25 years. Initially clean water would be injected creating a donut shaped CO₂ plume. Four extraction wells at the inner edge of the donut would pull CO₂ impacted groundwater back towards the plume center. The extracted groundwater would be treated for impacts of heavy metals and discharged under a NPDES permit. Approximately three years following installation, the remediation equipment and infrastructure would be decommissioned and the site restored to pre-remediation conditions. The estimated cost of remediation was \$7.82 M or \$9.38 M including a 20% contingency.

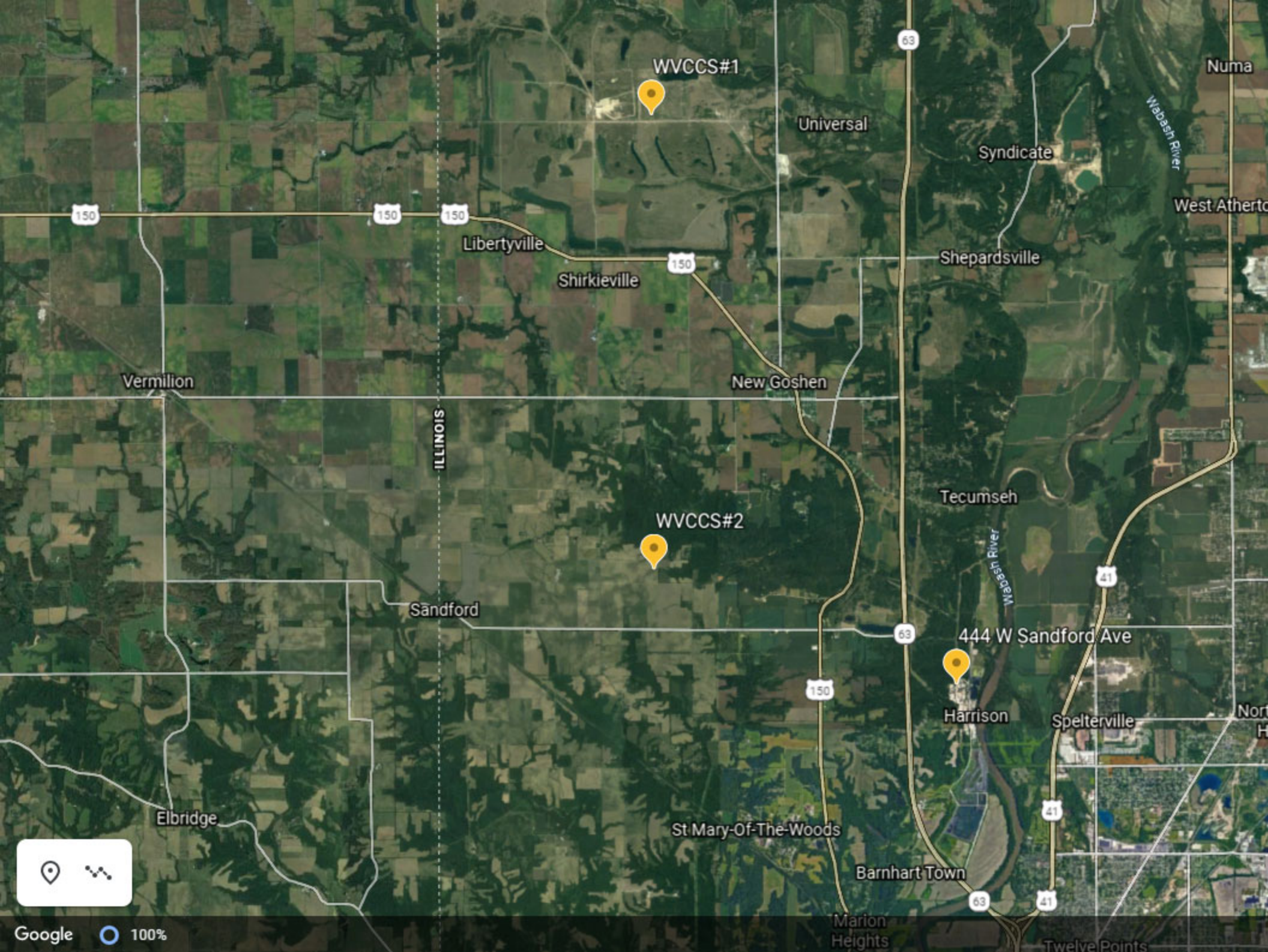
In developing the remediation estimate, it was assumed the costs would be incurred if WCS was no longer involved in the project and a third party was asked to complete the remedial activities in a manner to protect the USDWs. The costs included in this estimate cover the efforts required to ensure protection of the USDWs at no cost to the public. The cost estimate includes the assumption that the third party would not take over operation of the WCS CCS project and that CO₂ injection would cease immediately in the area of remediation. The remediation estimate does not include abandonment of the injection well or the associated injection infrastructure.

7.0 REFERENCES

- EPA, 2008. *Geologic CO₂ Sequestration Technology and Cost Analysis, Technical Support Document*, Office of Water (4604M), EPA 816-B-08-009, EPA, June 2008.
- EPA, 2011. *Geologic Sequestration of Carbon Dioxide, Underground Injection Control (UIC) Program Class VI Financial Responsibility Guidance*, Office of Water (4604M), EPA 816-R-11-005, EPA, July 2011.
- Esposito, 2011. *Remediation of possible leakage from geologic CO₂ storage reservoirs into groundwater aquifers*, Ariel Esposito and Sally M. Benson, Stanford University Department of Energy Resources Engineering, Energy Procedia 4 (2011), pages 3216 to 3223, published by Elsevier Ltd.
- Patrick Engineering, 2013. *Cost Estimate to Demonstrate Financial Responsibility for Class VI UIC Permit*, Patrick Engineering, March 8, 2013.

ATTACHMENT 1

FIGURES – Injection Well Locations



39.624410°
-87.488659°

39.624410°
-87.488659°

163

Legend

- Circle Measure
- Feature 1
- Feature 2
- Plume
- WVCCS#1

 WVCCS#1



Universal



Libertyville

Shirkieville

N Range Line Pl

111th Ave

Sh



Google Earth

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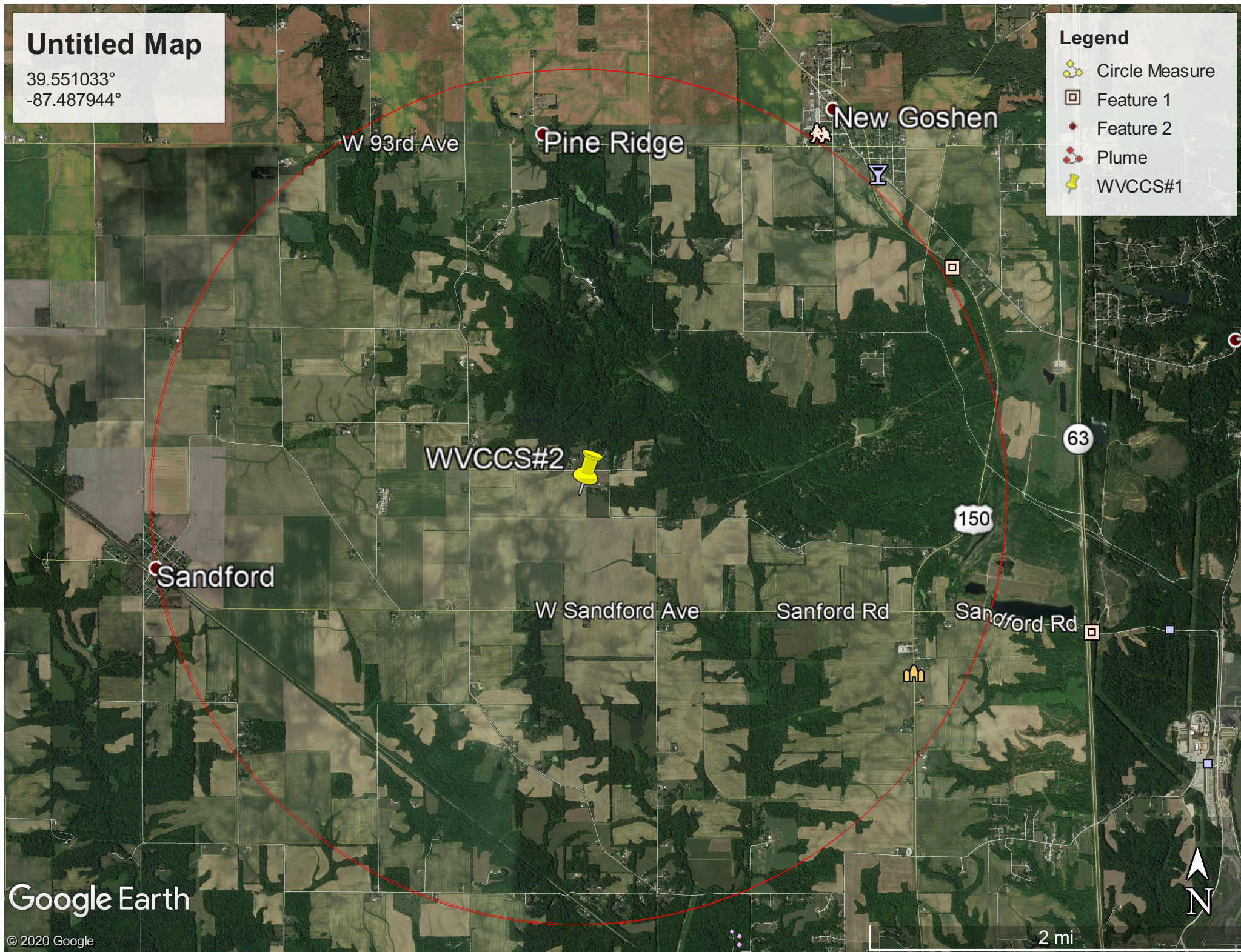


2 mi

Untitled Map

39.551033°
-87.487944°

- Legend**
- Circle Measure
 - Feature 1
 - Feature 2
 - Plume
 - WVCCS#1



Google Earth

© 2020 Google

2 mi

ATTACHMENT 2

Detailed Remediation Cost Estimate

Remediation Estimate
Wabash Valley Resources - CCS Project
Premise:
Discovered CO2 Leak is Pluggable
CO2 Impacts are to the USDW (Silurian Formation, 400 FT Thick (approx.), 2000 to 2400 FT Depth)
Leak Scenario - 10,000 lbs CO2, Plume Radius 225 m (1500 FT Diam./0.06 SQ MI)
Leaked Volume = 0.05% of CO2 Storage Volume (Forecast Volume of 20 MT of CO2)
Leak of 2,000 Ton/YR, 5 years old
Reference: Esposito, Ariel M.M., Remediation of Possible Leakage from Geologic CO2 Storage Reservoirs in Groundwater Aquifers. Stanford University Dept. of Energy Resources Eng. Jun 2010

| Item Description | QTY | UNIT | RATE | TOTAL | Notes |
|---|------|--------|------------|--------------|-------------------------|
| Planning & Permitting | | | | | |
| Project Planning/Coordination/Execution (2 Sr Staff) | 2080 | Hour | \$ 350 | \$ 728,000 | F/T Labor - 6 months |
| Remediation Plan Prep to EPA (Pre-Work) | 1 | LS | \$ 25,000 | \$ 25,000 | Eng Est |
| Rule 5 Permit/E&S Plan | 1 | LS | \$ 10,000 | \$ 10,000 | Eng Est |
| NPDES Permitting for WW Discharge | 1 | LS | \$ 10,000 | \$ 10,000 | Eng Est |
| Remediation Plan / As-Built / EPA Reporting / Coord. | 1 | LS | \$ 25,000 | \$ 25,000 | Eng Est |
| Injection Well Shut-Down/Plugging (4800 FT - Potosi Well) | | | | | |
| - Well Plugging | | FT | \$ 10 | \$ - | Est. Cost |
| - Geologist oversight, Expenses, PM | | Day | \$ 1,785 | \$ - | Est. Duration |
| ** WVR to handle Shut-Down / Action **** | | | | | |
| Leak Investigation/Hydrogeological Study | | | | | |
| Well Install to Delineate CO2 Plume (2400 FT Depth Well) | 10 | Each | \$ 150,000 | \$ 1,500,000 | Pioneer Est. |
| Geologist oversight, Expenses, PM | 100 | Day | \$ 1,785 | \$ 178,500 | 10 days (8 hrs/day) |
| CO2 Impacts Sample Collection / Analysis | 10 | Each | \$ 8,000 | \$ 80,000 | Pioneer Est. |
| Well Plugging (Post-Investigation) | 10 | Each | \$ 10,000 | \$ 100,000 | Pioneer Est. |
| Geologist oversight, Expenses, PM | 20 | Day | \$ 1,785 | \$ 35,700 | Est. - 2 days/well |
| Land Access - Leasing Agreements | 10 | Each | \$ 10,000 | \$ 100,000 | EPA Paper, Table 3 |
| REMEDATION SCENARIO (USDW CONTAMINATION) | | | | | |
| Item Description | QTY | UNIT | RATE | TOTAL | Notes |
| Well Installation & Modifications | | | | | |
| Extraction Wells - Inner Edge of Donut (2400 FT Depth) - Extraction Well Install - Ext. Well Geologist oversight, Exp., PM (12 days/well) | 4 | Each | \$ 235,000 | \$ 940,000 | Pioneer Quote |
| | 60 | days | \$ 1,785 | \$ 107,100 | 15 days/well (8 hr/day) |
| Convert Deep Well for Remediation Injection (CM Well) - Install Additional Casing Penetrations - Plug Deep Zone of CM Well / Equipment Modifications - Oversight Geo/Eng, Exp., PM | 1 | LS | \$ 60,000 | \$ 60,000 | WVR, \$10K/10 ft cost |
| | 1 | LS | \$ 10,000 | \$ 10,000 | Eng Est |
| | 5 | days | \$ 1,785 | \$ 8,925 | Eng Est (8 hrs/day) |
| Extraction Pumps - 10 gpm/well, 2400 ft, 40 gpm total | | | | | WVR Specified |
| - Well Pump (45 HP, 3-Ph, 10 gpm, 2400 ft) - Procure | 4 | Each | \$ 102,000 | \$ 408,000 | SLB Quote |
| - Well Head | 4 | Each | \$ 35,000 | \$ 140,000 | Innovex Quote |
| - 2-7/8 Tubing & pump install (9600 ft @ 30 ft each) | 320 | Each | \$ 50 | \$ 16,000 | Used w/Shipping |
| - Rig Crew - Pump & Tubing Install | 4 | Each | \$ 15,000 | \$ 60,000 | Pioneer Quote |
| - Oversight - Eng, Exp, PM - Pump Install (5 days/well) | 20 | days | \$ 1,785 | \$ 35,700 | Eng Est |
| - Electric Connection/Procure/Install for Pump | 4 | each | \$ 20,000 | \$ 80,000 | Barth Elec. Est. |
| - Trenching of Water/Conduit to Central Area (500 FT Max) | 4 | each | \$ - | \$ - | See Excavation Work |
| - Well Enclosure Building | 4 | Each | \$ - | \$ - | Not included |
| - Land Access - Leasing Agreements | 4 | Each | \$ 20,000 | \$ 80,000 | EPA Paper |
| Injection Water Source | | | | | |
| - Install Well for Water Source (6-in well, < 100 ft) | 4 | each | \$ 10,000 | \$ 40,000 | Eng Est./Indy 2019 Est |
| - Oversight Geo/Exp, PM - Pump Install (2 days/well) | 8 | days | \$ 1,785 | \$ 14,280 | 2 days/well-2019 Est |
| - Well Pump (7.5HP, 3-Ph, 75 gpm, 80 ft pipe, well-seal) | 4 | each | \$ 15,000 | \$ 60,000 | Eng Est/Indy 2019 Est |
| - Electric Connection/Procure/Install for Well Pump | 4 | each | \$ 12,000 | \$ 48,000 | Barth Elec. Est. |
| - Piping - Procure/Install- Valves, Flow Meter, Controls | 4 | each | \$ 2,500 | \$ 10,000 | Eng Est. |
| - Frac Tank for Injection Water Storage | 3 | Months | \$ 2,000 | \$ 6,000 | Eng Est |
| - Injection Pump (250 hp) - Procure/Install/Start-up | 1 | LS | \$ 55,000 | \$ 55,000 | SLB Quote |
| - Pump Motor Controller Procure | 1 | LS | \$ 27,500 | \$ 27,500 | SLB Quote |
| - Electric Connection/Procure/Install for Injection Pump | 1 | each | \$ 25,000 | \$ 25,000 | Barth Elec. Est. |
| - Oversight - Eng./Exp., PM - Pump Install (2 per well+4 Inj) | 12 | days | \$ 1,785 | \$ 21,420 | |
| - Trenching of Water/Conduit to Central Area (500 FT Max) | | each | \$ 12,000 | \$ - | See Excavation Work |
| - Land Access - Leasing Agreements | 0 | Each | \$ 20,000 | \$ - | Assume near Ext Wells |

| REMEDATION SCENARIO (USDW CONTAMINATION) | | | | | |
|---|------|---------|------------|---------------------|-----------------------|
| Item Description | QTY | UNIT | RATE | TOTAL | Notes |
| Extraction Fluid Treatment (40 GPM, Adsorption -2 YRS) | | | | | |
| - Treatment System Design & Testing | 1 | LS | \$ 15,000 | \$ 15,000 | Eng Est. |
| - Inlet Equal. 1000 gal Tank, 3 HP Pump, Level Switches | 1 | LS | \$ 6,000 | \$ 6,000 | Spill Solutions Quote |
| - Media Treatment Vessels (40 gpm, 2xHPAFs, skid, manifold) | 2 | LS | \$ 12,000 | \$ 24,000 | Spill Solutions Quote |
| - Media (Resin for Metal Removal) - Intial Fill | 2 | Vessel | \$ 16,000 | \$ 32,000 | Spill Solutions Quote |
| - Discharge Equal. Tank, 3 HP Pump, Level Switches | 1 | Each | \$ 6,000 | \$ 6,000 | Spill Solutions Quote |
| - Duplex Bag Filters w Manifold, Pre-Treatment | 1 | Each | \$ 5,000 | \$ 5,000 | Spill Solutions Quote |
| - Control Instruments & Auto-Dialer of Alarms | 1 | Each | \$ 20,000 | \$ 20,000 | Spill Solutions Quote |
| - Equipment off-load/install/start-up | 2 | Day | \$ 1,200 | \$ 2,400 | Spill Solutions Quote |
| - Oversight - Eng./Exp., PM - Equipment Install | 2 | days | \$ 1,785 | \$ 3,570 | Eng Est. |
| - Media Change out - w/Non Haz Disposal (3/yr, 2 yrs) | 6 | Vessels | \$ 22,000 | \$ 132,000 | Spill Solutions Quote |
| Site Improvements - Office/Treatment Bldgs | | | | | |
| - Site Improvment - 53 Stone Equip./driveways (3.75 Ac, 6-in) | 4500 | Ton | \$ 26 | \$ 117,000 | Eng Est & SCS Quote |
| - Treatment Building/Trailer - Freeze Protection - Rental | 30 | Month | \$ 1,000 | \$ 30,000 | Incl. setup/teardown |
| - Office Trailer/Storage Container - Rental | 30 | Month | \$ 750 | \$ 22,500 | Eng Est |
| - Utilities - Office Trailer Electric/Phone/Internet/Toilet | 30 | Month | \$ 750 | \$ 22,500 | Eng Est |
| - Electrician Work - Site/Trailer Improvements | 1 | LS | \$ 50,000 | \$ 50,000 | Barth Elec. Est. |
| - Electric Service (240 VAC/1 Ph) - Office Trailer/Transformer | 1 | LS | \$ 15,000 | \$ 15,000 | Barth Elec. Est. |
| - Elec. Service 800 amp/460V/3PH Install (New Svc) | 1 | LS | \$ 100,000 | \$ 100,000 | Barth Elec. Est. |
| - Perimeter Fence for Trespass Control | 5000 | LF | \$ 20 | \$ 100,000 | Est @ \$20/LF |
| - Land Use Rents and ROW | 30 | month | \$ 10,000 | \$ 300,000 | Eng Est |
| - Oversight - Eng./Exp., PM - Equipment Install | 10 | days | \$ 1,785 | \$ 17,850 | Eng Est. |
| Excavation Work - Remediation System Install | | | | | |
| - Trench to Water Wells-Water Pipe/Elec Conduit (4x500 ft) | 4 | each | \$ 10,000 | \$ 40,000 | SCS Quote |
| - Trench to Extract. Wells - WW Pipe/Elec. Conduit (4x500 ft) | 4 | each | \$ 10,000 | \$ 40,000 | SCS Quote |
| - Piping and Conduit - Procure/Place/ Pressure Test | 8 | each | \$ 1,000 | \$ 8,000 | Eng. Est. |
| - Oversight - Eng./Exp., PM - Pump Install (2 days/well) | 16 | days | \$ 1,785 | \$ 28,560 | Eng. Est. |
| - Erosion Control Measures | 1 | LS | \$ 15,000 | \$ 15,000 | SCS Quote |
| Operation, Maintenance, Monitoring of Remed. System | | | | | |
| - Operator Inspection / Sampling / PM - (40 hrs/week) | 116 | Week | \$ 5,025 | \$ 582,900 | 2 yrs & 3 months |
| - Monthly Discharge Analysis and Reporting | 24 | Month | \$ 5,000 | \$ 120,000 | Eng Est |
| - Wastewater Discharge Fees (presumed NPDES to Creek) | 0 | Month | \$ 8,760 | \$ - | \$0.005/gal |
| - Electric Cost (45hp x 4, 460VAC 3-ph, 34 KW) - Ext. Pumps | 25 | Month | \$ 19,584 | \$ 489,600 | Est @ \$0.20/kwh |
| - Electric Cost (5 hp x 2, 460 VAC 3-ph, 3.7 KW) - Treat. Pumps | 25 | Month | \$ 1,066 | \$ 26,640 | Est @ \$0.20/kwh |
| - Electric Cost (7.5 hp x 4, 460 VAC 3-ph, 5.6 KW) - Well Pumps | 80 | Days | \$ 108 | \$ 8,602 | Est @ \$0.20/kwh |
| - Electric Cost (250 hp , 460 VAC 3-ph, 186.5 KW) - Inj. Pump | 80 | Days | \$ 895 | \$ 71,616 | Est @ \$0.20/kwh |
| - Annual Extraction Well O&M (2400 ft x 4 wells) | 9600 | Feet | \$ 3 | \$ 53,800 | EPA Paper, Table 3 |
| System Decommissioning - Site Restoration | | | | | |
| - Inject & Treatment Equipment Decommission & Removal | 1 | Each | \$ 50,000 | \$ 50,000 | Eng Est |
| - Water Wells - Injection - Decomm & Abandon (< 100 ft) | 4 | Each | \$ 2,500 | \$ 10,000 | Eng Est |
| - Extraction Wells - Decommission/Pump Removal | 4 | Each | \$ 10,000 | \$ 40,000 | Pioneer Quote |
| - Extration Wells - Plugging Wells (2400 FT) | 4 | Each | \$ 10,000 | \$ 40,000 | Eng Est |
| - Underground Pipe & Conduit - Excavate & Removal | 8 | Each | \$ 5,000 | \$ 40,000 | Eng Est |
| - Electrical Service & Equipment Removal | 1 | LS | \$ 25,000 | \$ 25,000 | Barth Elec. Est. |
| - Site Restoration (Pre-Disturbed Conditons)/Road Removal | 1 | LS | \$ 60,000 | \$ 60,000 | Eng Est |
| Total | | | | \$ 7,815,663 | |
| w/20% Conting | | | | \$ 9,378,795 | |

Notes: Remediation to Address Items 1 to 3 below:

Item 1 - Acidification Due to CO2 Migration

Decrease in pH of 1 to 2 Units - USDW Stds. Exceed

Item 2 - Toxic Metal Dissolution and Mobilization

Exceedance of USDW Standards

Item 3 - Displacment of GW with Brine due to CO2 Injection

Anion/cations exceed USDW Stds.

ATTACHMENT 3

Cost Estimate Supporting Documents

Michael J. Devir

From: Bruce R. Winningham
Sent: Tuesday, December 8, 2020 2:59 PM
To: Michael J. Devir
Subject: RE: Well installation costs

The \$150K/\$250K included P & A.

Company drills 24/7. My experience is 1 day to set the surface casing (and I have seen PLENTY go wrong with this process; ask me about Tennessee some day when I'm feeling better). Drill 400'/day divided by 2400 feet = 6 days drilling. 2 days to run and intermediate casing and grout; say 10 24-hour days average; maybe a little less if drilling goes wonderfully; maybe a lot more if something goes south (oh, we hit oil). So that's the \$150K well.

For the \$250K well assume 4 to 7 additional days for completion; installing casing, installing pump and piping, development, so 14 to 21 days.

So you're pumping how much CO2 laden brine water from the recovery well? What are you doing with the water once you've degassed it (you know the premium you pay for tonic water in a plastic bottle, right)? Getting an NPDES permit? Sending it to a POTW? Reinjecting (won't you have to get UIC permitted well installed)?

Throw in \$10 to \$12K per location for site restoration.

From: Michael J. Devir <mdevir@keramida.com>
Sent: Tuesday, December 8, 2020 12:14 PM
To: Bruce R. Winningham <bwinningham@keramida.com>
Subject: RE: Well installation costs

Bruce:

Michael J. Devir, P.E.
KERAMIDA Inc.
317/685-6600 (Office) • 317/363-5972 (Cell)

From: Bruce R. Winningham <bwinningham@keramida.com>
Sent: Tuesday, December 8, 2020 11:27 AM
To: Michael J. Devir <mdevir@keramida.com>
Subject: Well installation costs

Got costs from Brad McCulley from Pioneer in Vincennes for the well installations.

For the exploratory boreholes to grab a CO2 sample above the Maquoketa in the Lower Silurian \$150,000 plus Drill Stem grab sample of \$8,000.

- 1) Were you provided any estimated duration per borehole/sample collection?
- 2) Any specifics on how these samples are generated – Is it a dissolved CO2 sample at formation pressure? Presume we will also have to sample for other WQ parameters.
- 3) Any estimate on cost to abandon these boreholes at a later time once delineation is complete?
- 4) How long abandonment take per borehole?

The recovery well within the Lower Silurian all casing and pump installed (provided by us) is \$250,000.

- 1) The \$250K includes tubing and pump install (KEI provides pump)?
- 2) Estimated duration on well install and pump/tubing install?
- 3) Is a well head included (have estimate of \$10K), but do not want to double count?
- 4) Future cost to abandon well 3 years later?
- 5) Duration to abandon well?

Based on above think we may be getting close – just need to close these additional gaps.

ARTIFICIAL LIFT

PURCHASE AGREEMENT PROPOSAL



Keramida Inc.

December 1, 2020

Project: Extraction Wells No 1 through 4

Attention: Michael Devir, Operations Engineer
401 North College Avenue Indianapolis, IN 46202

Schlumberger Contact:

Carlie Duhon, Artificial Lift Sales Engineer
+1 318 426 5504 | CDuhon3@slb.com

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Schlumberger

Proposal Summary

Technical

Company: Keramida Inc.

Well Name: Extraction Wells No 1 through 4

| Wellbore and Desired Operating Conditions | | Pumping Conditions | |
|---|---------------|--|---------------|
| | | Operating Hz | 58.4 Hz |
| Bottom Hole Temperature | 120 °F | TDH | 2750.07 ft |
| Perforation Depth | not available | Pump Intake Pressure (at bottom pump) | not available |
| Pump Setting Depth (at intake) | 2400 ft | Total Motor Load | 16.3 HP |
| Wellhead Pressure | not available | KVA @ Junction Box | 31.73 |
| Target Rate | 340 STB/d | Production Rate | 341.7 STB/d |

Commercial

| | Amount (USD) | Quote Numbers |
|--|--------------|---------------|
| Equipment Purchase Price | \$50,452.64 | ELR5-00010 |
| Optional Equipment Purchase Price | \$51,471.66 | |

Schlumberger will be responsible for providing the following equipment:

- Downhole ESP Equipment (Pumps, Gas handler, Gas separator, protectors, motors, cable, sensor) as per quote; and
- Surface Equipment (VSD, Transformer, Junction Box, Choke Console and consumables) as per quote.

Services that will be invoiced separately:

- Schlumberger Technician to install, pull, and troubleshoot the equipment;
- Freight to deliver the equipment to and from the location and the Schlumberger base in Midland, TX; and
- Charges for the clean-up and testing of equipment and cable when pulled.

Proposal Acceptance and Contract Terms

Schlumberger submits this proposal subject to the Commercial Terms described herein and the attached Schlumberger General Terms and Conditions ("SGTCs"). If Customer and Schlumberger have a current master services agreement or similar framework arrangement (MSA) covering the Products, Services and/or Rentals offered herein ("Work"), all Work performed by Schlumberger as a result of this proposal shall be governed by the MSA terms. For any portion of the Work and any matters not covered by the existing MSA, the SGTCs shall apply.

Schlumberger shall provide Artificial Lift products and services for Customer's project - **Extraction Wells No 1 through 4** - in accordance with this Agreement dated December 1, 2020 for quote(s) listed above. This proposal is valid for thirty (30) days from the date of this proposal, and its validity can only be extended by written consent of Schlumberger. Customer's acceptance of this proposal shall be evidenced by Customer signing this proposal or ordering the Work, in whole or in part, by issuing a work order, purchase order or similar document, or by giving Schlumberger an instruction to proceed with the provision of the Work by email, phone, text message or otherwise. Such Customer's acceptance together with this proposal shall constitute the Contract between the parties for the provision of the Work ordered by Customer, and any subsequent modifications to the scope of work, prices, or any other conditions in the Contract shall require written consent of both parties. The parties will use their best efforts to coordinate scheduling to ensure timely delivery of Products, Services and/or Rentals not included in this proposal will be agreed to by both parties prior to commencement of the work. Schlumberger's payment terms are cash in advance unless Schlumberger has approved credit prior to any transaction.

Keramida Inc.

Schlumberger Technology Corporation

Signature: _____

Name: Michael Devir

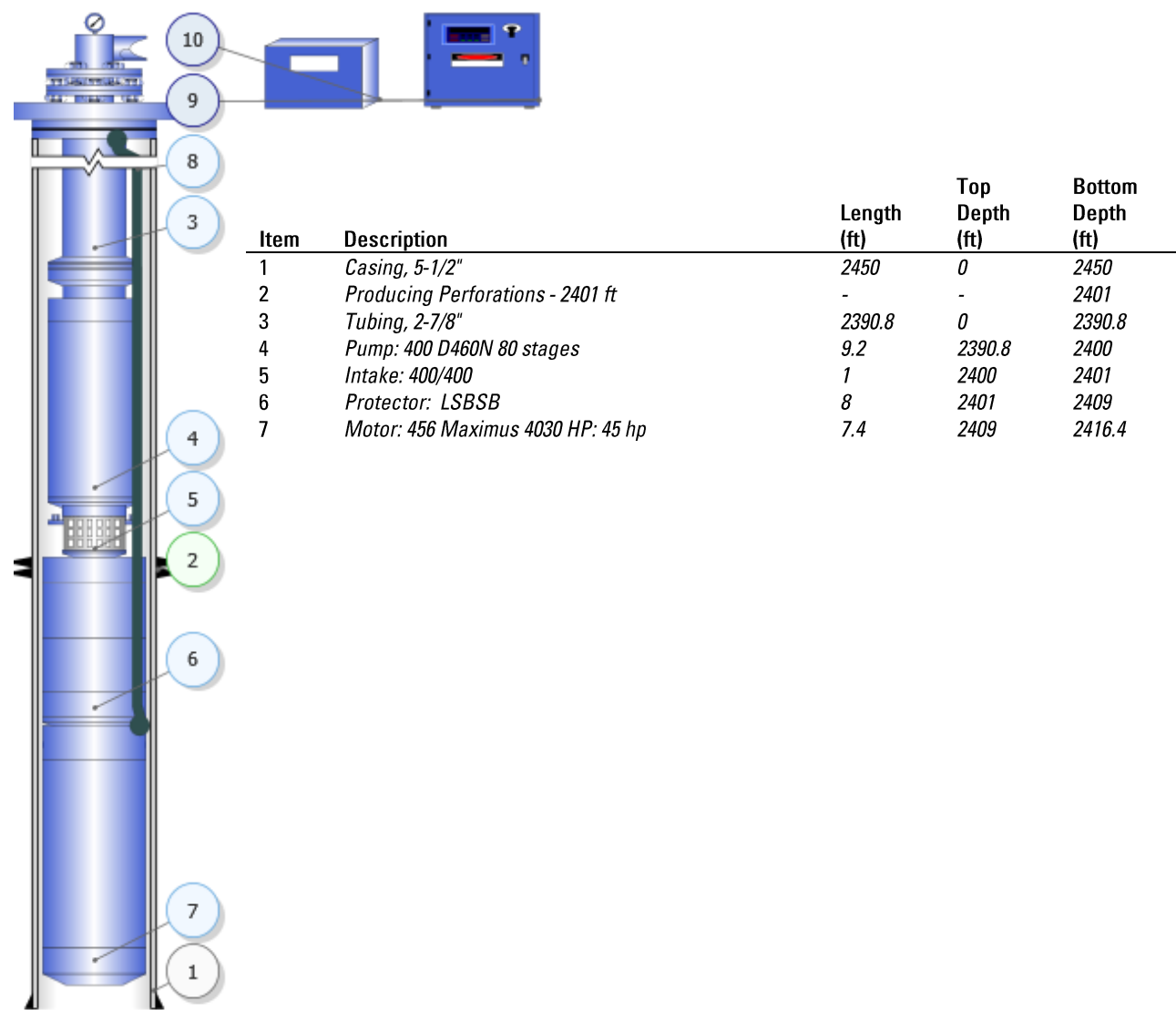
Date: _____

Signature: _____

Name: Carlie Duhon

Date: December 1, 2020

Design Report
Schematic



General Report

General Information

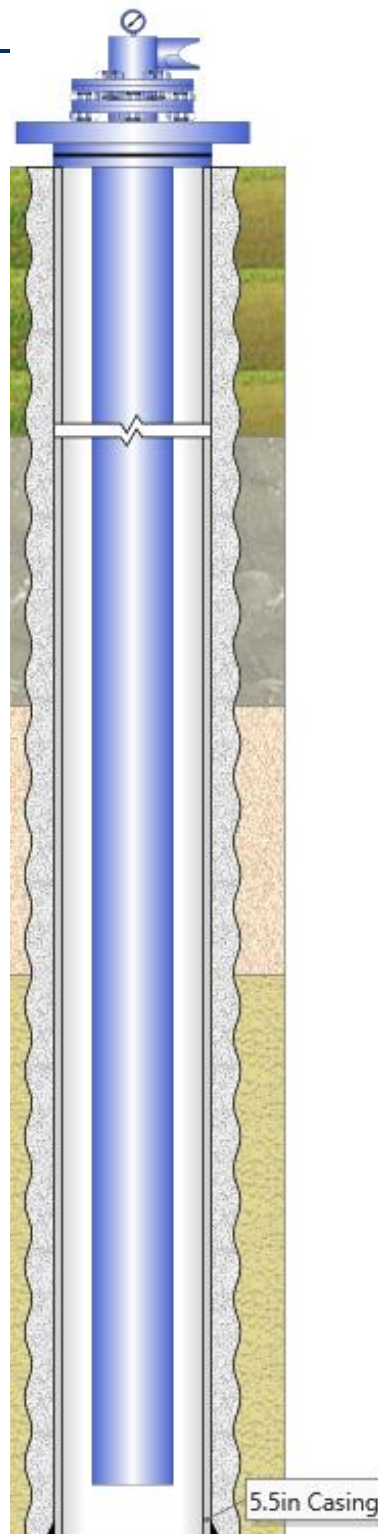
Contact Details

| | |
|--------------------|-------------------------------------|
| Project | ESP Design (High WC) |
| Prepared by | RS |
| Date | 11/30/2020 12:00:00 AM |
| Corporate Customer | KERAMIDA INC |
| Country | US |
| Location | VIGO County, Indiana |
| Field & Lease | VIGO County, Indiana |
| Well Name | Extraction Wells No 1 through 4 |
| API Well Reg. # | TBD |
| Company Engineer | Mike Devir |
| Contact Address | 401 N College Ave, Indianapolis, IN |
| E-Mail | mdevir@keramida.com |
| Phone | 317-685-6600 |

Comment

PRELIMINARY DESIGN
ASSUMPTIONS
No corrosive fluid
Brine application (no potable water)
SG 1.18 (no gas) BHT 120F
Fluid coming below the ESP (no shroud)
VSD application

TEST POINT
340 bfpd
TDH 2750' (THP 200 psi)



Input Data and Information

Production and Fluid Data

| | | | | |
|-------------|-----|------|------------------------|------|
| Oil Gravity | 30 | %API | Water Specific Gravity | 1.18 |
| Water Cut | 100 | % | | |

Wellbore Information

| | | | | | |
|----------------------|----|----|-------------------------|-----|----|
| Wellhead Temperature | 80 | °F | Bottom Hole Temperature | 120 | °F |
|----------------------|----|----|-------------------------|-----|----|

| Casing | Length (ft) | OD (in) | ID (in) | Roughness (in) | Weight (lbm/ft) |
|--------|----------------|------------|------------|-------------------|--------------------|
| 1 | 2450 | 5.5 | 4.892 | 0.00065 | 0 |
| Tubing | Length (ft) | OD (in) | ID (in) | Roughness (in) | Weight (lbm/ft) |
| 1 | 2390.8 | 2.87 | 2.441 | 0.00065 | 0 |

Desired Operating Conditions

| | | | | | |
|--------------|--------|-------|-------------------|------|----|
| Intake Depth | 2400 | ft | Frequency | 58.4 | Hz |
| Design Rate | 340 | STB/d | Wellhead Pressure | | |
| Pump Speed | 3287.7 | RPM | TDH | 2750 | ft |

Equipment and Results

Pumping Conditions

| | | | | | |
|-----------------|--------|-------|-----|---------|----|
| Production Rate | 341.7 | STB/d | TDH | 2750.07 | ft |
| Pump Speed | 3287.7 | RPM | | | |

Pump Information

| | | | | | |
|-----------------------|----------------|--------------|-----|--|--|
| Device Information | REDA 400 D460N | | | | |
| Stages | 80 | | | | |
| Staging Configuration | CR-CT | Staging Type | ARZ | | |

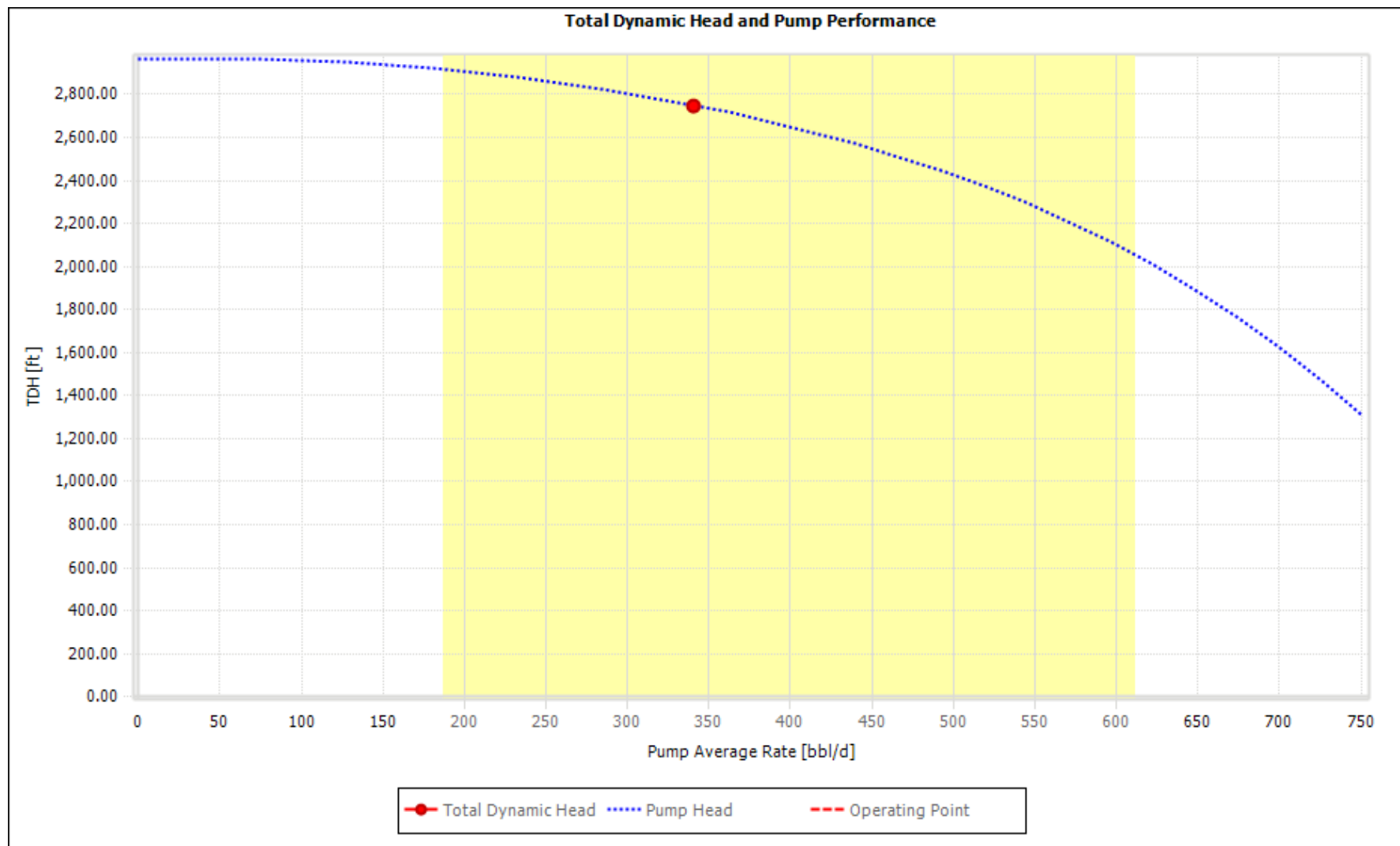
Motor Nameplate Information

| | | | | | |
|--------------------|-----------------------|-------|----------------|------|------|
| Device Information | REDA 456 Maximus 4030 | | | | |
| Volts | 437.7 | Volts | Power | 45 | hp |
| Speed | 3287.7 | RPM | Amp | 67.1 | Amps |
| Rating Factor | 100 | % | Winding Number | 4030 | |
| Instrument Tube OD | | | | | |

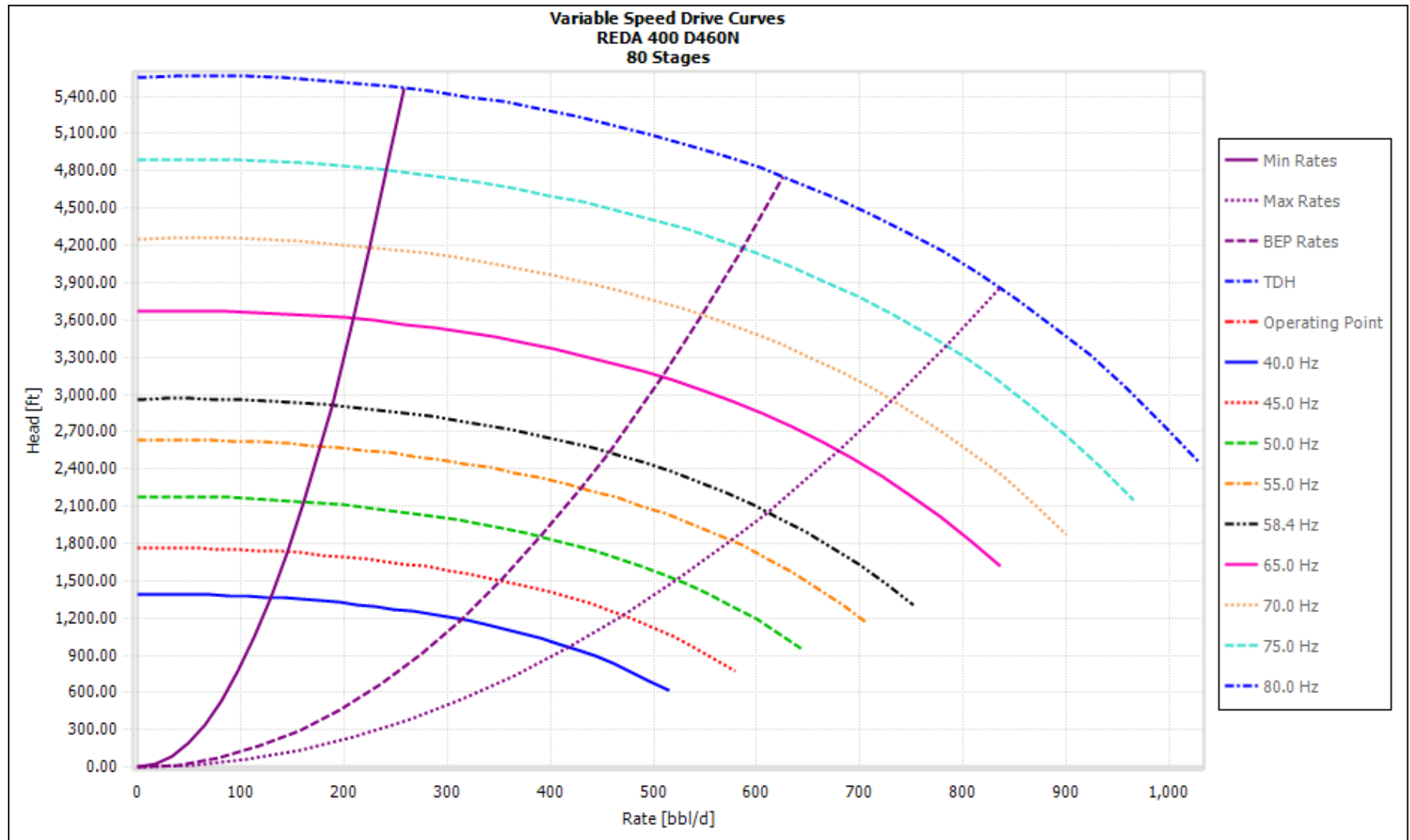
Conditions at Operating Frequency

| | | | | | |
|---------------------|------|------|----------------------|-------|-------|
| Operating Frequency | 58.4 | Hz | Volts @ Junction Box | 472.7 | Volts |
| Motor Amp | 38.8 | Amps | KVA @ Junction Box | 31.73 | |
| Total Motor Load | 16.3 | hp | Motor Volts | 426 | Volts |

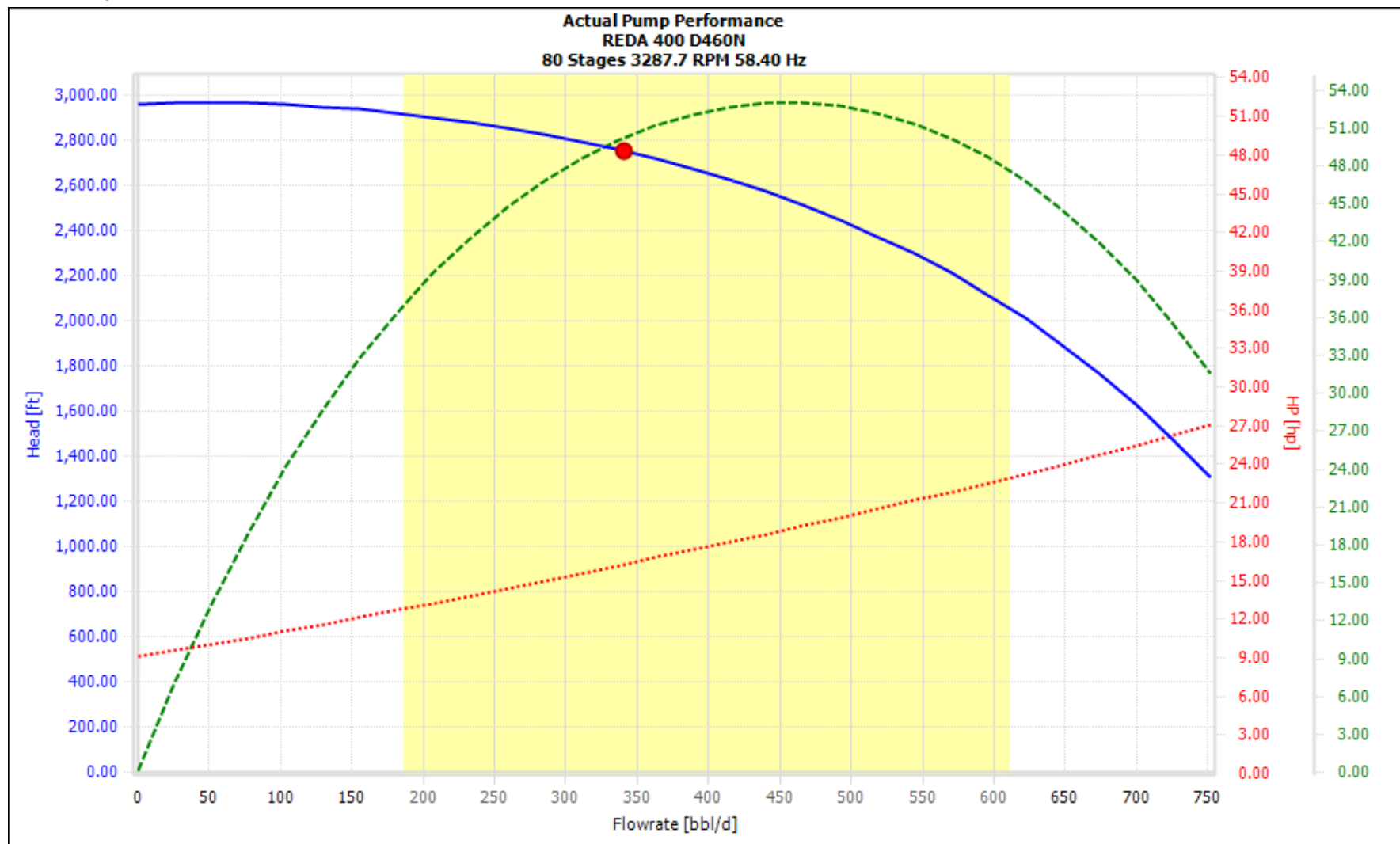
Inflow / Outflow



VSD H-Q Curve



Actual Pump Curve



Pricing - Equipment

Quote Number: **ELR5-00010**

Valid From: **30-Nov-2020** To: **30-Dec-2020**

Quote

| | | |
|------------------------------|--|--|
| Customer: KERAMIDA | Well Name: Extraction Wells (BUDGETARY) Field: County: State/Prov: Country: UWI Number: | External Ref: Ref Doc: PO: AFE: Cust Ref: Cust Cont #: Commercial Agreement: SLB Sales Rep: Carlie Duhon |
| | | |
| | | |
| | | |
| | | |

Service Instructions:

Budgetary quote for one (1) ESP

THE ESTIMATED CHARGES AND DATA SHOWN BELOW ARE SUBJECT TO CORRECTION BY SCHLUMBERGER.

| SPN | Description | Qty | UOM | Price | Disc | Amount | Opt |
|----------------------|---|------|-----|-----------|------|-----------|-----|
| 10 1260710 | HEAD: BOLT ON DISCHARGE PMP, 400, CS, 2.87 OD 8RD EUE <i>Tubing 2-7/8"</i> | 1 | EA | 393.32 | | 393.32 | |
| 20 102820537 | PUMP: D460N CR-CT 80 STG 400/400 60 CS BTHD, .62 HS MON, M-TRM, AFL, ARZ-TT, MOD CR, FACT SHIM | 1 | EA | 7,394.56 | | 7,394.56 | |
| 30 100330707 | COUPLING: S/A, .62-6B X .87-6B SPL, PMP 387 X GS 400, 150 HP, FACT SHIM | 1 | EA | | | | |
| 40 102773028 | INTAKE: BOI, 400/400 RLOY .87 HS MON, M-TRM, AFL, ARZ-TT, FACT SHIM | 1 | EA | 513.16 | | 513.16 | |
| 50 100288502 | COUPLING: S/A, .87-6A SPLINE, BOLT-ON, MAXIMUS | 1 | EA | | | | |
| 60 103278875 | PROTECTOR: MAXIMUS, BSBSB-S/LT, 400/456, KTB/HL GLACIER, .87 INC 718, CS, AFL, M-TRM, ARZ-TT HEAD, FACT SHIM, 6 OIL, MAXJOINT | 1 | EA | 7,467.93 | | 7,467.93 | |
| 70 101909493 | MOTOR: 456, 3, 4030, MAXIMUS, RA-S, CS, M-TRM, AS, AFL, HL, GRB, MAXJOINT | 1 | EA | 10,446.84 | | 10,446.84 | |
| 80 100655610 | BASE GAUGE: <i>xt150 TYPE 0, VITON/AFLAS, 13CR</i> | 1 | EA | 8,549.70 | | 8,549.70 | x |
| 90 100496104 | MLE:456 MAXLOK-400, 75FT, KELB M, 5KV, 6/1, P/I <i>Length: 65' (to be confirmed on location)</i> | 1 | EA | 2,461.83 | | 2,461.83 | |
| 100 L3201027 | CABLE: REDALEAD AWG2, 5KV (2/1 ELB .020 G5F) | 2500 | FT | 7.46 | | 18,650.00 | |
| 110 0832766 | COATING, MONEL: FLAME SPRAY | 25 | FT | 45.00 | | 1,125.00 | |
| 120 ATL-M-SPARE-002 | Coupling set (51-200hp rating) and O-rings | 1 | EA | 2,000.00 | | 2,000.00 | |
| 130 101095702 | PICv2 - Phoenix Interface Card Version 2 | 1 | EA | 637.80 | | 637.80 | x |
| 140 100221741 | Cable Package for Phoenix Interface Card (PIC) and Phoenix Choke | 1 | EA | 671.54 | | 671.54 | x |
| 150 101120028 | Communication Card - Isolated RS232/485 | 1 | EA | 298.44 | | 298.44 | x |
| 160 0295204 | JUNCTION BOX: HIGH VOLTAGE, ALL SIZE CABLE | 1 | EA | 814.29 | | 814.29 | x |
| 170 E-STAND-JBOX_BWW | EASEL STAND FOR FIBERGLASS JUNCTION BOX | 1 | EA | 357.14 | | 357.14 | x |
| 180 101683563 | Instruct Controller and I/O Card Kit | 1 | EA | 3,904.13 | | 3,904.13 | x |

Quote Number: **ELR5-00010**
Valid From: **30-Nov-2020** To: **30-Dec-2020**

Quote

| | | |
|-----------------------|--|--|
| Customer: KERAMIDA | Well Name: Extraction Wells (BUDGETARY) Field: County: State/Prov: Country: UWI Number: | External Ref: Ref Doc: PO: AFE: Cust Ref: Cust Cont #: Commercial Agreement: |
| | | SLB Sales Rep: Carlie Duhon |

THE ESTIMATED CHARGES AND DATA SHOWN BELOW ARE SUBJECT TO CORRECTION BY SCHLUMBERGER.

| SPN | Description | Qty | UOM | Price | Disc | Amount | Opt |
|-------------------|--|-----|-----|-----------|------|------------|-----|
| 190 A446020-031 | PHOENIX CHOKE W/ ENCL, 3PH, 5kV | 1 | EA | 2,738.62 | | 2,738.62 | x |
| 200 103156800 | SpeedStar SWD VSD:S7PLUS,260kVA,N3R,6P,No Instruct | 1 | EA | 33,500.00 | | 33,500.00 | x |
| Requested Total | | | | | | 50,452.64 | |
| Optional Total | | | | | | 51,471.66 | |
| Quote Total (USD) | | | | | | 101,924.30 | |

THE ESTIMATED CHARGES SHOWN ABOVE MAY BE EXCLUSIVE OF TAX AND THE FINAL INVOICE WILL INCLUDE ALL APPLICABLE TAXES.

UNLESS OTHERWISE SPECIFIED BY SCHLUMBERGER, THIS QUOTATION IS VALID FOR A PERIOD OF 30 DAYS FROM THE ABOVE QUOTE DATE, AND THE WORK WILL BE PERFORMED IN ACCORDANCE WITH THE ATTACHED GENERAL TERMS AND CONDITIONS, OR THE TERMS OF THE APPLICABLE MASTER SERVICE AGREEMENT IF ONE IS IN FORCE BETWEEN CUSTOMER AND SCHLUMBERGER. CUSTOMER'S WRITTEN ACCEPTANCE OF THE TERMS OF THIS QUOTE SHALL FORM A BINDING CONTRACT BETWEEN THE PARTIES UNDER THE TERMS OF THE ATTACHED GENERAL TERMS AND CONDITIONS OR THE APPLICABLE MASTER SERVICE AGREEMENT.

Artificial Lift Commercial Terms and Conditions of Sale

- I. **Scope of Work or Scope of Supply**
- A. Upon Contractor's acceptance of Company's request for artificial lift services, Contractor agrees to provide tools, equipment, products, supplies, labor and supervision for artificial lift services and associated products ("Services") under the conditions mutually agreed between the Parties.
- B. If Company subsequently changes the desired Services, delivery time/place, scope or operating conditions, Contractor reserves the right to adjust the pricing and/or discount offerings in consideration for such changes or terminate the work without penalty to either Party.
- II. **Term and Termination**
- The Term of this Agreement shall be as stated in the Proposal. Either Party may terminate this Agreement upon thirty (30) days' prior written notice to the other Party.
- III. **Pricing**
- A. Prices are as stated in the Proposal.
- B. Contractor's prices do not include sales, value added taxes, use or similar taxes and such taxes, where applicable, shall be added to the quoted prices and invoiced accordingly. Contractor's prices for all equipment also do not include shipping, mobilization, transportation, insurance, cost of consumables, or service or personnel charges.
- C. Any third-party items required in connection with the provision of the equipment and services shall be recharged at mutually agreed pricing.
- IV. **Order Cancellation by Company**
- A. If Company decides to terminate an Order or part thereof, Company shall provide to Contractor prior written notice of such full or partial termination; and Company shall pay to Contractor: the costs for all finished equipment manufactured pursuant to such order; the cost of all affected inventory on order and not cancellable or usable for other customers of Contractor; and direct costs and fees (including, as applicable, fees for mobilization and demobilization) actually incurred by Contractor or another open customer order, prior to the date of order termination. Payment by Company to Contractor for such costs and fees shall be due in the event work is terminated pursuant to Section I. B. above.
- V. **Equipment Sales**
- Direct sale of equipment refers to any equipment that is sold for the intended use by the Company. Sale of equipment can also include customized equipment.
- VI. **Equipment Rental**
- Rental charges, including any standby charges, begin when the equipment is made available to Company and end when the equipment returns to the Contractor's base. Part of a day shall be considered a full day. If Contractor's rental equipment is damaged beyond repair caused by a non-Contractor related incident, the replacement cost will be charged as per the price of a new item as found in the corresponding Order or Price List.
- VII. **TENORM**
- A. Any used equipment and/or products to be returned to the Contractor's storage facility, service center, or field site will be tested for Technically Enhanced Naturally Occurring Radioactive Material ("TENORM") by Company prior to back loading from the wellsite. This shall be done irrespective of the ownership of the equipment and/or product and regardless of whether Contractor or a third party uninstalls the equipment and/or product.
- B. Any equipment and/or product found to be contaminated by TENORM is the sole responsibility of the Company and must be back loaded to the Company's nominated waste management contractor for decontamination.
- C. All costs associated with decontamination, storage, transportation, and disposal of TENORM equipment and/or product tool shall be to the Company's account.
- D. In the event the equipment and/or product becomes contaminated by TENORM to a level where it is no longer economical to clean or decontaminate, Company shall take ownership of such equipment and/or product and pay Contractor the full cost of such property.
- VIII. **Warranty Conditions**
- A. Contractor warrants the sale of equipment in accordance to the Master Services Agreement currently in effect between the Parties ("MSA") or if no MSA exists, to the Contractor's most recently published General Terms and Conditions ("GTCs"). Notwithstanding anything to the contrary herein or in the MSA or GTCs, warranty will only be applicable to equipment provided each of the following conditions are met:
- a. Design of the equipment for application, installation and operation in the Company's well or asset is performed by Contractor;
- b. The manufacture of the equipment is performed by Contractor;
- c. The installation and commissioning of the equipment is performed by Contractor; and
- d. The monitoring and surveillance of the operating equipment in the well is provided by Contractor.
- B. Notwithstanding anything to the contrary herein or in the MSA or GTCs, if equipment does not meet the conditions above, or if the equipment is otherwise used outside of well parameters indicated by Company at time of purchase, then any and all warranties provided herein by Contractor shall immediately lapse and become null and void on such equipment. Any and all costs incurred by Contractor in ascertaining whether or not a warranty claim is valid, including but not limited to dismantling, inspection, failure analysis (DIFA) and investigation of the equipment, shall be borne by the Company.
- C. Notwithstanding anything to the contrary herein or in the MSA or GTCs, any description of the Contractor's equipment or any specifications, whether in promotional material or elsewhere, used in connection with the Contractor's equipment is used for the sole purpose of identifying the Contractor's equipment and is not, and shall not be construed as a warranty or condition of sale of the Contractor's equipment.
- IX. **Service and Personnel**
- Service and personnel charges shall apply per day (unless otherwise stated), from the day of Contractor's mobilization to the day of demobilization. These charges also apply when Contractor's personnel perform work at Company's request at Contractor or Company's facility, and when personnel are on standby for Company's exclusive use. Service charges (where applicable) are indicated in the Proposal. One or a combination of the service and personnel charges may be applicable at any given time. The prices set forth in this Proposal do not include any costs related to additional requirements for personnel to work in a specific area or Company's facility, such as local certification, H2S training and other such costs for personnel certification or training.
- X. **Drawings**
- Drawings and prints provided by Contractor shall not be reproduced or copied in any manner by Company without the prior written consent of Contractor and shall not be used for manufacture by persons other than Contractor unless otherwise agreed to by Contractor. Any drawings and general information furnished by Contractor which are outside of the general scope of the order and are to be used to aid Company in assembly, installation or erection of products sold by Contractor are furnished gratis and form no part of this agreement.
- XI. **Mobilization and Demobilization of Equipment**
- A. Mobilization and demobilization shall include activities associated with the transportation of Contractor's equipment and if applicable, operating supplies and materials to the well site or Company specified location. Demobilization may also include disassembly, removal and site cleanup. Demobilization of equipment applies from the time the equipment leaves the Company's well site or Company-specified location until it is returned to Contractor's service point or point of origin (as specified by Contractor). For equipment not mobilized or demobilized by Contractor, Company shall assume all risk and liability of following collection from Contractor's facilities. Mobilization and Demobilization of services shall be charged at mutually agreed pricing.
- B. **Delivery.** If Company is transporting equipment, Contractor shall deliver the products to Company at Contractor's factory dock or at such site designated by Contractor. Partial deliveries shall be permitted. Delivery dates are approximate and dependent on Company providing Contractor will all monies guarantees, and information needed to permit Contractor to proceed immediately with work and without interruption. Contractor shall not be liable for any damage or loss whether arising directly or indirectly out of any delay delivery. Delivery shall be taken by Company within fourteen (14) days of the dispatch to Company of a written request to take delivery of the products. If for any reason any portion of the products cannot be delivered when ready due to any cause, Contractor may invoke its rights under the indemnities provision under the GTCs attached hereto or the indemnities provision under an MSA, if one is in place.
- C. **Equipment Damage.** In the event of damage to or loss of equipment during Contractor's transportation, Contractor's liability and Company's sole remedy for such damage or loss shall be limited to repair or replacement of this equipment at Contractor's option and cost as soon as reasonably practicable.
- D. **Additional Charges.** As specified in the order, Contractor will deliver the equipment within the stated mobilization period, based on a formal mobilization notice. If the Company requests the mobilization to be expedited, then Contractor will endeavor to meet the agreed target delivery date but shall not be held responsible or be penalized for any delay that is not reasonably within Contractor's control. All costs incurred by Contractor associated to the prioritizing and expediting the order shall be invoiced to Company at mutually agreed pricing.

Schlumberger General Terms & Conditions

GENERAL TERMS AND CONDITIONS

Ref. US.2019.08

THE FOLLOWING GENERAL TERMS AND CONDITIONS CONTAIN INDEMNITY AND CHOICE OF LAW PROVISIONS - READ CAREFULLY.

1. **ACCEPTANCE.** By ordering Schlumberger's services, equipment, or products, Customer voluntarily elects to enter into and be bound by these General Terms and Conditions, along with any commercial documents that accompany the Order.

2. **DEFINITIONS.**

- a. **Chemicals** – any chemicals, substances and Fluids, used or unused, or considered as waste or by-products, cuttings, or cavings, radioactive tracer material and other hazardous wastes (as defined pursuant to applicable law and including but not limited to any packaging, transportation or storage containers and/or materials) and residue resulting from, or incident to, Schlumberger's performance of the Work.
- b. **Claim(s)** – Damage, loss, expense, liability, claims, demands and causes of action of every kind and character (including spousal and survivor's actions, all costs and expenses, and reasonable attorney fees associated therewith) including, but not limited to, special, punitive, exemplary, general, compensatory, direct, indirect, incidental, or consequential damages, either under common law, equity, statute, or otherwise, whether based on tort, contract, strict liability, or statutes that may or could be asserted including without limitation, actions in rem or in personam, civil or criminal actions and/or causes of action howsoever arising.
- c. **Customer** – the person, firm or other entity to which any Work is supplied or provided by Schlumberger.
- d. **Fluids** – chemicals, emulsions, or chemically treated fluids and residue, including but not limited to drilling fluids, completion fluids, displacement fluids, wellbore fluids, wellbore treatments, stimulation fluids, whether water, oil, or synthetic based.
- e. **Group** – Either Schlumberger or Customer and its respective contractors, subcontractors, consultants, agents, invitees, co-venturers, co-owners, partners, investors, joint venturers, co-lessees, co-working interest owners, lessors, Customer's clients (as part of Customer Group), and its and their parents, affiliates, subsidiaries, and each of their respective officers, directors, managers, shareholders, members, representatives, servants, consultants, agents, employees and invitees.
- f. **Order** – an oral or written request for Work, a Schlumberger quotation accepted by Customer and/or a service or purchase order document issued by Customer and accepted by Schlumberger, which together with these General Terms and Conditions constitute the **Contract** between Schlumberger and Customer. Schlumberger shall not be obligated to provide any Work before an Order is agreed to by both parties.
- g. **Products** – equipment, goods, materials, tools, supplies, Chemicals and/or products or equipment sold or otherwise provided by Schlumberger to Customer.
- h. **Rentals** – Customer's hiring of Products and/or equipment from Schlumberger for a period of time.
- i. **Schlumberger** – the entity providing Work to Customer, which may be: **Schlumberger Technology Corporation**, a Texas corporation, for and on behalf of itself and its US affiliates (excluding Western Geco LLC); and/or **M-I L.L.C.**, a Delaware limited liability company, for and on behalf of itself and its US affiliates; and/or **Smith International, Inc.**, a Delaware corporation, for and on behalf of itself and its US affiliates; and/or **Cameron International Corporation**, a Delaware corporation, for and on behalf of itself and its US affiliates.
- j. **Services** – services provided by Schlumberger to Customer, including Products and personnel customarily required to provide such services.
- k. **Work** – Products, Services and/or Rentals.

3. **INVOICING AND PAYMENT TERMS.** Customer acknowledges that Schlumberger's payment terms are cash in advance unless the value of the Work is supported by Customer credit approved by Schlumberger prior to the transaction. Customer also acknowledges that Schlumberger, in its sole discretion, may refuse to grant Customer the right to request Work on credit and/or may rescind the right to request Work on credit at any time. In the event that Customer's credit account with Schlumberger becomes delinquent, Schlumberger shall have the right to require, at its sole discretion, payment in advance, an irrevocable letter of credit, or bank guarantee as a condition to continue performing any ongoing Work or accepting any additional Work.

For transactions not supported by Schlumberger approved credit, Schlumberger's invoice will be issued upon receipt of full payment from Customer. If Customer requires any supporting documents or information (e.g. order #, AFE #, etc.) to be submitted with Schlumberger's invoices, then such requirements must be agreed in the Order before the Work is provided. Unless otherwise specifically agreed in an Order, the following invoicing conditions shall apply to Work for which credit has been approved:

- a. Schlumberger may invoice Customer for each portion or stage of the Work, as described and priced in the Order, as soon as practicable and without frequency restrictions.
- b. Schlumberger may invoice Customer for Products as follows: fifty percent (50%) of the sale price immediately upon receipt and acceptance of an Order, and the remaining fifty percent (50%) immediately upon delivery of the Products.
- c. Schlumberger may invoice Customer for Rentals in advance, as follows: one hundred percent (100%) of the rental price for the initial rental period immediately upon receipt and acceptance of an Order. In the event the rental is extended beyond the initial rental period or the scope is expanded, Schlumberger will submit a subsequent invoice to

Customer for an amount equal to one hundred percent (100%) of the additional rental price to cover such extended period or expanded scope.

- d. Schlumberger may invoice Customer for any and all reimbursable items in advance.

Schlumberger's invoice shall be deemed correct and shall evidence Customer's acceptance of Work delivered, unless Schlumberger receives prompt written notice of any disputed items within five (5) business days after the date of the invoice. Such notice shall explain the reason for the dispute in detail, along with any supporting documentation of Customer's position, and Customer and Schlumberger will meet in good faith within fifteen (15) calendar days from Schlumberger's receipt of the notice to resolve the dispute. If an invoice is disputed, however, Customer agrees to pay Schlumberger any undisputed portion of that invoice as set forth below and without delay. Upon settlement of the dispute, Customer shall immediately pay to Schlumberger all amounts agreed by the parties to be due with respect to the disputed amount(s) and Schlumberger shall make the appropriate corrections regarding the disputed amounts by issuing, as applicable, a credit or debit note to Customer. Customer shall have no right to withhold or offset payments, except to the extent it is agreed as a result of the foregoing dispute resolution procedure. Customer waives all rights to dispute any item (or submit a claim for amounts involved) where Schlumberger has not received written notification of a disputed item within two (2) years from the date such Work is actually provided.

Customer shall pay the total invoice amount without any payment retentions (other than taxes which must be withheld as mandated by tax legislation). Payment shall be made by electronic transfer of funds to Schlumberger's designated bank account, or by other payment means mutually agreed, at Schlumberger's office in Houston, Texas, unless another office location has been designated in the payment instructions contained in an Order or an invoice. The payment for any transaction for which credit has been approved shall be due to, and received by, Schlumberger, on or before the thirtieth (30th) day from the date of the invoice.

When payment is electronic (e-commerce), Customer and Schlumberger may agree to mutually beneficial electronic processes for executing business transactions, including but not limited to the system-to-system exchange of purchase orders, field tickets, bills of lading, invoices and electronic catalogs. Such electronic transactions shall adhere to industry accepted standards and processes (Petroleum Industry Data Exchange (PIDX)). Customer, Schlumberger, and any contracted third party technology providers will execute a standard Electronic Data Agreement between Customer and OFS Portal, LLC or a mutually agreed upon Electronic Data Agreement developed around the OFS Portal, LLC agreement to govern said electronic transactions.

Customer agrees that Schlumberger is entitled to charge and accrue interest on any past due balance (including amounts that are disputed by Customer but are found to be due and owing) at the rate of 1.5% per month or the maximum interest allowable by applicable state or federal laws, if such laws limit interest to a lesser amount. If Schlumberger employs a collection agency or attorneys to collect any outstanding invoice(s) or enforce its rights under these General Terms and Conditions, Customer agrees to pay all actual expenses of collection, all collection agency fees, and all attorneys' fees and court costs, including, but not limited to, attorneys' fees incurred in connection with litigation, mediation, arbitration, bankruptcy, or other proceedings. In the event that Customer's payment of Schlumberger's invoice is received by Schlumberger after the due date, any price discount will be unearned, and Schlumberger has the right to revoke any and all discounts previously applied in arriving at the net invoice price. Upon revocation, the full invoice price, without discount, will become immediately due and owing and subject to collection.

As used herein, the term "**Receivables**" shall mean: all of Customer's rights and interests in (a) all accounts and (b) all general intangibles, whether now existing or hereafter arising, and all proceeds thereof, relating to the properties for which Schlumberger provides Work. Customer hereby grants a security interest in Customer's Receivables to secure Customer's obligations to Schlumberger, whether now existing or hereafter arising. Customer shall promptly support Schlumberger as may be necessary to file all instruments (including financing statements), in order to perfect, preserve, protect and renew the security interests granted herein on all Receivables.

4. **TAXES.** Customer shall pay or reimburse Schlumberger for, to the extent allowed by applicable laws and regulations, any and all taxes or other levies (other than Schlumberger's income taxes) imposed by any government, governmental unit or similar authority with respect to the charges made or payments received by Schlumberger in connection with the Work.

5. **INDEPENDENT CONTRACTOR.** Schlumberger is and shall be an independent contractor with respect to the performance of Work, and neither Schlumberger nor anyone employed by Schlumberger shall be the agent, representative, employee or servant of Customer in the performance of such Work or any part thereof. When Schlumberger's employees (defined to include Schlumberger's direct, borrowed, special, or statutory employees) are covered by the Louisiana Workers' Compensation Act, La R.S. 23:1021 *et seq.*, Customer and Schlumberger agree that all Work and operations performed by Schlumberger and its employees pursuant to this Contract are an integral part of and are essential to the ability of Customer to generate Customer's goods, products and Services for purposes of La R.S. 23:1061 (A)(1). Furthermore, Customer and Schlumberger agree that Customer is the statutory employer of Schlumberger's employees for purposes of La R.S. 23:1061 (A)(3). Irrespective of Customer's status as the statutory employer or special employer (as defined in La R.S. 23:1031 (C)) of Schlumberger's employees, Schlumberger shall remain primarily responsible for the payment of Louisiana workers' compensation benefits to its employees, and shall not be entitled to seek contribution for any such payments from Customer.

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6. OBLIGATIONS OF CUSTOMER.

- a. Well Conditions; Notification of Hazardous Conditions.** Customer, having custody and control of the well and superior knowledge of the conditions in and surrounding it, shall provide Schlumberger with all necessary information to enable Schlumberger to perform its Services safely and efficiently. Schlumberger's Products, Rentals and Services are designed to operate under conditions normally encountered in the well bore; however, if hazardous or unusual conditions exist, Customer shall notify Schlumberger in advance and make special arrangements for servicing such wells.
- b. Chemicals.** The handling, transportation, treatment and/or disposal of any Chemicals, used in or resulting from Schlumberger's performance of the Work, is the sole responsibility of Customer, including when such Chemicals are returned to the surface of the land or sea from below the rotary table. In no event shall Schlumberger be considered the generator of Chemicals or samples, irrespective of any handling transportation, treatment, or disposal provided by Schlumberger. Customer understands and agrees that all Chemicals and samples are the property of Customer and that Customer is the generator of the Chemicals and samples irrespective of any handling, transportation or treatment by Schlumberger. Unless Customer has a separate agreement with Schlumberger for the storage of samples, Schlumberger may return samples to Customer upon completion of Schlumberger's analysis or dispose of samples, at Customer's cost, in accordance with Customer's instructions. All Chemicals and fluids in the drilling rig's tanks, piping, valves, and pumps, and in the borehole and reserve pit (or frac tanks where there is not a reserve pit) are not in Schlumberger's possession or control, and that Schlumberger is not responsible for such. Customer agrees that it will handle, transport and dispose of any such Chemicals and samples under Customer's name and waste generator number, in accordance with all applicable federal, state and local laws and regulations. **CUSTOMER HEREBY AGREES NOT TO ASSERT ANY CLAIM OR BRING ANY COST RECOVERY ACTION AGAINST SCHLUMBERGER GROUP AND SHALL WAIVE, RELEASE, PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS SCHLUMBERGER GROUP FROM AND AGAINST ANY AND ALL CLAIMS IN CONNECTION WITH THE USE, HANDLING, TREATMENT, STORAGE, TRANSPORTATION AND/OR DISPOSAL OF CHEMICALS, REGARDLESS OF THE SOLE, JOINT, ACTIVE, PASSIVE, GROSS OR CONCURRENT NEGLIGENCE, STRICT LIABILITY, BREACH OF CONTRACT OR DUTY, OR OTHER FAULT OF ANY MEMBER OF SCHLUMBERGER GROUP.** Schlumberger shall not be responsible for the signing of manifests or for the storage, transportation, treatment or disposal of Chemicals.
- c. Radioactive Sources.** If any radioactive source is lodged or lost in a well or at the well site or while being transported by or while under the custody or control of Customer Group, Customer shall immediately notify Schlumberger and exert its best efforts to locate and recover the source and take all necessary precautions to avoid breaking, damaging or rupturing the source. If the source is irretrievable, or if it or its container is damaged or ruptured, Customer shall immediately notify Schlumberger and comply with all applicable laws and regulations including isolating and marking the location of the source. Customer shall not attempt to recover a sealed source in a manner that, in Schlumberger's opinion, could result in its rupture. If the source ruptures, Customer shall minimize any resulting contamination and radiation exposure, and decontaminate the environment, equipment and personnel.
- d. TENORM.** Any equipment used, whether it belongs to Contractor Group, Customer Group or a Third Party, that is intended to be returned to Contractor's storage facility, base, service center or field site will be tested for Technically Enhanced Naturally Occurring Radioactive Material ("TENORM") prior to backloading from the site. This shall be done irrespective of ownership of the equipment and regardless of whether Contractor Group, Customer Group, or a Third Party uninstalls the equipment. Any equipment found to be contaminated by TENORM shall be the responsibility of Customer and shall be decontaminated by Customer at its own expense. If disposable personal protective equipment ("PPE") is used for the handling of TENORM contaminated equipment at the site, for example, Tyvek coveralls, latex gloves, etc, such PPE shall be left at the site for disposal by Customer and be provided for or reimbursed by Customer. Once decontaminated, equipment shall be transported to Contractor's storage facility, base, service center or field site with appropriate documentation from Customer's nominated waste management contractor verifying decontamination. All costs associated with decontamination, storage, transportation, and disposal of TENORM contaminated equipment and PPE shall be for Customer's account. Moreover, if Contractor Group's equipment becomes contaminated by TENORM to a level where it is no longer economical to clean or decontaminate, Customer shall take custody of such equipment and reimburse Contractor for the full new replacement cost of such equipment.
- e. Fishing Operations.** Customer shall assume the entire responsibility for operations in which Customer Group or a third party fish or attempt to fish for the equipment of any member of Schlumberger Group or perform any operation that may jeopardize the retrievability or the integrity of equipment containing radioactive sources. Schlumberger will, without assuming liability and if so requested by Customer, render assistance for the recovery of such equipment. Customer shall use commercially reasonable efforts to attempt recovery of Schlumberger Group's equipment.
- f. Change Orders.** Customer may, with reasonable notice, request to change the Work to be provided under an Order by issuing a written change order authorization document (referred to herein as the "Change Order"). If upon receiving a Change Order, Schlumberger determines that there is any impact that increases the cost or affects the

time to perform or provide the Work, Schlumberger shall submit a proposal to Customer specifying the pricing and scheduling changes needed to execute the Change Order. Customer shall review the proposal and may accept, reject or modify the proposal, subject to mutual agreement; however, Customer shall be deemed to have accepted such proposal once Schlumberger proceeds as specified in the Change Order. Schlumberger may, at its sole discretion, decline to execute the Change Order and such declination to execute shall not prejudice Schlumberger's rights under the applicable Order.

7. WARRANTY FOR PRODUCTS, RENTALS AND SERVICES.

- a.** Schlumberger warrants that all Services provided hereunder shall be performed in a good and workmanlike manner in accordance with good oilfield practices and that it shall exercise diligence to ensure the correctness and safe transport of all log, test and other data. Schlumberger will give Customer the benefit of its best judgment based on its experience interpreting information and making written or oral recommendations concerning logs or tests or other data, type or amount of material or service required, manner of performance or predicting results. Nevertheless, all such recommendations or predictions are opinions only and, in view of the impracticability of obtaining first-hand knowledge of the many variable conditions, the reliance on inferences, measurements and assumptions which are not infallible, and/or the necessity of relying on facts and supporting services furnished by others, **NO WARRANTY IS GIVEN CONCERNING THE ACCURACY OR COMPLETENESS OF ANY LOG, TEST, RESERVOIR OR SEISMIC DATA (INCLUDING SOFTWARE MODELS), OR OTHER DATA, THE EFFECTIVENESS OF MATERIAL USED, RECOMMENDATIONS GIVEN, OR RESULTS OF THE SERVICES RENDERED. SCHLUMBERGER SHALL NOT BE HELD RESPONSIBLE FOR ANY LOSS OR DAMAGE ARISING FROM THE RESULTS AND/OR RECOMMENDATIONS SUGGESTED BY SUCH WORK, NOR IS THE WORK INTENDED TO PROVIDE THE BASIS FOR ANY DECISIONS SUBSEQUENTLY MADE BY CUSTOMER, WHICH ARE AND SHALL REMAIN CUSTOMER'S SOLE RESPONSIBILITY. SCHLUMBERGER WILL NOT BE RESPONSIBLE FOR ACCIDENTAL OR INTENTIONAL INTERCEPTION OF OR TAMPERING WITH DATA BY OTHERS, NOR DOES SCHLUMBERGER GUARANTEE THE SAFE STORAGE OR THE LENGTH OF TIME OF STORAGE OR AGAINST LOSS OF ANY DIGITAL TAPES, OPTICAL LOGS OR PRINTS, OR OTHER SIMILAR PRODUCTS OR MATERIALS.** Any warranty claim for Services must be made prior to Schlumberger's demobilization from the well site or for Services to repair equipment, within seventy two (72) hours after installation of such repaired equipment.
- b.** Schlumberger warrants that Products furnished hereunder shall conform to the type and specifications represented by Schlumberger. Schlumberger reserves the right, at its sole discretion, to use new, used or refurbished parts in the assembly of its Products. Schlumberger warrants all its Products sold to be free of material defects in material and workmanship for a period of twelve (12) months from the date of delivery to the location stated in the Order, provided that notice of any defects is received by Schlumberger within the warranty period. Rentals are warranted only for the rental period. The above warranty does not apply to Products that have been affected by normal wear and tear, modified at Customer's request, supplied by Customer or purchased by Schlumberger at Customer's request, subjected to improper handling, storage, application, installation, operation or maintenance by anyone other than Schlumberger, and/or damaged by aggressive fluids, lightning, vandalism, or improper voltage supply or force majeure. No warranty is given to rapidly wearing Products or consumables. Schlumberger does not warrant or guarantee the results of the use of Rentals. Well conditions which prevent satisfactory operation of Rentals do not relieve Customer of its responsibilities for payment of the rental prices and other costs agreed upon in the applicable Order.
- c.** Schlumberger's sole liability and Customer's exclusive remedy under the foregoing warranties is expressly limited to the repair, replacement or the refund of an equitable portion of the applicable purchase or rental price, at Schlumberger's sole option, of Products, Rentals or Services which prove to be defective within the warranty period and shall not include claims for labor costs, non-productive time, expenses of Customer resulting from such defects, including but not limited to removal or reinstallation of Products or the costs of heavy lifting or vessel /rig time, recovery under general tort law or strict liability or for damages resulting from delays, loss of use, or other direct or indirect, incidental or consequential damages of any kind. A Customer claim pursuant to this warranty shall be made immediately upon discovery and confirmed in writing within thirty (30) days after discovery of the defect. Where items claimed to be defective are determined not to be defective or to be defective as a result of Customer Group's use of the item, Schlumberger may invoice the service call to Customer. Defective items must be held for inspection or returned to the original Schlumberger delivery point upon request. Schlumberger shall have the right to inspect the Products claimed to be defective and shall have the right to determine the cause of such defect. Returned Products shall become the property of Schlumberger. In no event shall Schlumberger be liable for the cost of substitute products, services, or rentals obtained by Customer from others to cover any Product, Service or Rental which is defective or otherwise not in compliance with the applicable Order.
- d.** Notwithstanding anything to the contrary herein, with regard to any services, materials, products or equipment furnished by contractors, subcontractors, vendors and/or suppliers of Schlumberger Group, Schlumberger's liability shall be limited to the assignment of such contractors, subcontractors, vendors- and/or suppliers' warranties to Customer, to the extent such warranties are assignable.

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THE FOREGOING WARRANTIES FOR SERVICES, PRODUCTS AND RENTALS ARE IN LIEU OF ALL OTHER WARRANTIES, WHETHER ORAL, WRITTEN, EXPRESS, IMPLIED OR STATUTORY. IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY SHALL NOT APPLY. SCHLUMBERGER'S WARRANTY OBLIGATIONS AND CUSTOMER'S REMEDIES THEREUNDER (EXCEPT AS TO TITLE) ARE SOLELY AND EXCLUSIVELY AS STATED HEREIN.

8. TITLE AND RISK OF LOSS

- a. Unless otherwise agreed between the parties in an applicable Order, title to and risk of loss for Products sold, other than Fluids, will pass to Customer upon the earlier of payment, factory acceptance test (or other acceptance testing) or delivery to Customer's designated carrier at Schlumberger's manufacturing facility. The prices of Products exclude any costs of transportation, handling, insurance or any other costs for delivery beyond Schlumberger's manufacturing facility set forth in the quotation or applicable Order or other document as agreed to by Customer. At Customer's request, Schlumberger may arrange for shipment of Products to a location designated by Customer, and Customer will pay or reimburse Schlumberger for all freight, preparation, and in-transit insurance costs so incurred by Schlumberger. At Customer's request, subject to storage space availability and upon mutual agreement on storage fees, Schlumberger may agree to a bill-and-hold arrangement where Schlumberger would temporarily store Products sold to Customer, but Customer agrees that in such a case the title to and risk of loss for Products sold and stored will pass to and remain with Customer upon delivery to Schlumberger's designated storage facility, regardless of when the Products are ultimately delivered to Customer. In the event that purchased or repaired Products not subject to a bill-and-hold arrangement are left at a Schlumberger facility for over thirty (30) days, Schlumberger reserves the right at its sole discretion to charge storage fees to Customer and/or to consider the Products abandoned and sell them for scrap or otherwise dispose of them at Customer's cost.
- b. Title to and risk of loss for cement and stimulation fluids sold will transfer to Customer upon blending or deployment into the well or Customer's equipment connected to the well. Title to and risk of loss for Fluids, other than cement and stimulation fluids, will transfer to Customer (i) upon delivery to Customer's carrier, (ii) upon delivery to Customer's location, or (iii) upon blending, whichever occurs first. Title to and risk of loss for rented Fluids will transfer back to Schlumberger upon Schlumberger's written acceptance into its inventory, provided returned Fluids meet the minimum specifications set forth in the Order; however, if the specifications are not met, Customer shall pay Schlumberger the full sale price for the rented Fluids as would be applicable in case of a sale of the same.
- c. The time, method, place or medium of payment will not limit Schlumberger's rights in and to the Products until payment has been received in full. On all Orders, Schlumberger shall retain a security interest in the Products, irrespective of attachment to the land or equipment of Customer or any third party, to the extent of any unpaid balance of the purchase price therefor, and Schlumberger may use all reasonable efforts to retain and/or obtain possession of such Products until such unpaid balance has been received in full and accepted by Schlumberger.

9. INDEMNITIES

- a. **Personnel and Property**
 1. SCHLUMBERGER SHALL BE RESPONSIBLE FOR AND HEREBY AGREES TO WAIVE, RELEASE, PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS CUSTOMER GROUP FROM AND AGAINST ANY AND ALL CLAIMS ARISING OUT OF OR IN CONNECTION WITH DAMAGE TO OR LOSS OR DESTRUCTION OF PROPERTY OF OR THE PERSONAL INJURY, ILLNESS OR DEATH OF ANY MEMBER OF SCHLUMBERGER GROUP ARISING OUT OF OR IN CONNECTION WITH THE CONTRACT AND/OR THE WORK PROVIDED HEREUNDER.
 2. CUSTOMER SHALL BE RESPONSIBLE FOR AND HEREBY AGREES TO WAIVE, RELEASE, PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS SCHLUMBERGER GROUP FROM AND AGAINST ANY AND ALL CLAIMS ARISING OUT OF OR IN CONNECTION WITH DAMAGE TO OR LOSS OR DESTRUCTION OF PROPERTY OF OR THE PERSONAL INJURY, ILLNESS OR DEATH OF ANY MEMBER OF CUSTOMER GROUP ARISING OUT OF OR IN CONNECTION WITH THE CONTRACT AND/OR THE WORK PROVIDED HEREUNDER.
- b. **Special Indemnity.** NOTWITHSTANDING ANYTHING TO THE CONTRARY HEREIN, CUSTOMER ASSUMES ALL LIABILITY FOR AND AGREES TO WAIVE, RELEASE, PROTECT, DEFEND, INDEMNIFY, AND HOLD HARMLESS SCHLUMBERGER GROUP FROM AND AGAINST ALL CLAIMS BROUGHT BY OR ON BEHALF OF ANY MEMBERS OF CUSTOMER GROUP, SCHLUMBERGER GROUP OR ANY THIRD PARTY ARISING OUT OF OR IN CONNECTION HERewith FOR PROPERTY DAMAGE, PERSONAL INJURY, ILLNESS, DEATH OR LOSS THAT RESULTS FROM: (I) FIRE, EXPLOSION, SEEPAGE, BLOW-OUT, CRATERING, PRESSURE CONTROL OPERATIONS, INDUCED SEISMICITY EVENTS, WILD-WELL OR WORK PERFORMED TO CONTROL A WILD-WELL INCLUDING, BUT NOT LIMITED TO: DAMAGE TO, LOSS OF, DESTRUCTION AND/OR REPLACEMENT OF, OR RELEASE OR ESCAPE OF SUBSTANCES FROM, ANY PROPERTY, EQUIPMENT, DRILLING RIG/UNIT/VESSEL/PLATFORM OR OTHER FIXED OR FLOATING STRUCTURE, INCLUDING OIL/GAS PRODUCTION FACILITIES OR PIPELINES, AT OR AROUND A SITE (INCLUDING ANY DOWNTIME, REMEDIATION, OR RECOVERY TIME); (II) POLLUTION, AND/OR CONTAMINATION EMANATING FROM ANY AND ALL WELLS, WELL BORES AND/OR RESERVOIRS OR RESULTING FROM FRACTURING SERVICES OR ANY WORK, OR RADIATION DAMAGE (INCLUDING ENVIRONMENTAL POLLUTION, CONTAMINATION OR DAMAGE) RESULTING FROM SCHLUMBERGER GROUP'S RADIOACTIVE TOOLS OR EQUIPMENT WHILE BELOW THE SURFACE OF THE LAND OR, IN THE EVENT OF CONTAMINATION ORIGINATING ABOVE THE SURFACE OF THE LAND, WHEN THE RADIOACTIVE SOURCE IS UNDER THE CUSTODY

OR IN THE CONTROL OF ANY MEMBER OF THE CUSTOMER GROUP; AND POLLUTION OR CONTAMINATION, CAUSED BY CUSTOMER GROUP'S FAILURE TO PROPERLY HANDLE, TREAT, TRANSPORT, USE OR DISPOSE OF ANY CHEMICALS AS REQUIRED BY SECTION 6.b HEREOF OR OTHERWISE, INCLUDING CONTAINMENT, CLEAN-UP, DISPOSAL AND REMEDIATION OF THE POLLUTANT AND CONTAMINATION, WHETHER OR NOT REQUIRED BY AN APPLICABLE FEDERAL, STATE OR LOCAL LAW OR REGULATION; (III) DAMAGE TO WELL(S), BOREHOLE(S), RESERVOIRS OR UNDERGROUND DAMAGE, INCLUDING BUT NOT LIMITED TO DAMAGE OR INJURY RESULTING FROM FRACTURING SERVICES, LOSS OF OIL, GAS, OTHER MINERAL SUBSTANCES OR WATER, OR THE WELL-BORE ITSELF, SURFACE DAMAGE ARISING FROM SUBSURFACE OR SUBSEA DAMAGE, INCLUDING TRESPASS, AND DAMAGE TO DOWN-HOLE EQUIPMENT; (IV) COST TO KILL OR CONTROL A WILD-WELL, UNDERGROUND OR ABOVE THE SURFACE, INCLUDING ANY SIDETRACKING, FISHING, REDRILLING OR REWORKING AND RELATED CLEAN-UP COSTS; (V) DAMAGE TO PROPERTY OWNED BY, IN THE POSSESSION OF, OR LEASED BY CUSTOMER GROUP OR THE WELL OWNER, IF DIFFERENT FROM CUSTOMER (THE TERM "WELL OWNER" SHALL INCLUDE WORKING AND ROYALTY INTEREST OWNERS AND THE OWNER OF ANY LAND AND OIL/GAS PRODUCTION FACILITIES OR PIPELINES, DRILLING RIG/VESSEL, PLATFORM OR OTHER STRUCTURE AT OR WITHIN 500 METERS OF THE WELL SITE) AND THIRD PARTIES; (VI) LOSS OR DAMAGE RESULTING FROM FAILURE OF CUSTOMER GROUP'S PRESSURE CONTROL EQUIPMENT AND/OR DEVIATION FROM SCHLUMBERGER'S PRESSURE CONTROL STANDARD AT CUSTOMER'S REQUEST; OR (VII) LOSS OF OR DAMAGE TO SCHLUMBERGER GROUP'S PROPERTY OR PRODUCTS, INCLUDING BUT NOT LIMITED TO, RECOVERY, REPAIR AND REPLACEMENT EXPENSES, WHEN SUCH LOSS OR DAMAGE OCCURS: (A) IN THE HOLE OR BELOW THE ROTARY TABLE, (B) WHILE IN TRANSIT OR BEING MOVED ON ANY FORM OF TRANSPORTATION OWNED OR FURNISHED BY CUSTOMER, (C) WHILE LOCATED AT THE WELL SITE WHEN SCHLUMBERGER PERSONNEL ARE NOT PRESENT, (D) AS A RESULT OF IMPROPERLY MAINTAINED PRIVATE ACCESS ROADS TO THE WELL SITE OR AS A RESULT OF THE INFERIOR CONDITION OF LEASE ROADS OR THE SITE, OR (E) WHILE BEING USED BY OR WHILE UNDER THE CUSTODY OR CONTROL OF ANY PERSON OTHER THAN A SCHLUMBERGER EMPLOYEE, WHETHER IN AN EMERGENCY OR OTHERWISE. WITH RESPECT TO (A) ABOVE, THE PROPERTY AND PRODUCTS WILL BE VALUED AT THEIR RESPECTIVE NEW LANDED REPLACEMENT COST OR, IF REPAIRABLE, AT REPAIR COST PLUS HANDLING AND TRANSPORTATION TO SCHLUMBERGER'S DESIGNATED LOCATION. RENTAL CHARGES ON THE EQUIPMENT LOST OR DAMAGED IN THE HOLE SHALL CONTINUE TO BE PAID UP TO AND INCLUDING THE DATE ON WHICH SCHLUMBERGER RECEIVES NOTICE IN WRITING OF THE LOSS OR DAMAGE.

- c. **APPLICATION OF INDEMNITIES.** THE ASSUMPTION OF LIABILITY AND INDEMNITIES IN SECTIONS 9.a AND 9.b ABOVE SHALL APPLY TO ANY INJURY, ILLNESS, DEATH OR CLAIM ARISING OUT OF OR IN CONNECTION WITH THE CONTRACT AND/OR THE WORK PROVIDED HEREUNDER, WITHOUT REGARD TO THE CAUSE(S) THEREOF INCLUDING, WITHOUT LIMITATION, UNSEAWORTHINESS, STRICT LIABILITY, ULTRAHAZARDOUS ACTIVITY, BREACH OF EXPRESS OR IMPLIED WARRANTY, IMPERFECTION OF MATERIAL, DEFECT OR FAILURE OF EQUIPMENT, DEFECT OR "RUIN" OR OTHER CONDITION OF PREMISES, INCLUDING ANY CONDITIONS THAT PRE-EXIST THESE GENERAL TERMS AND CONDITIONS OR THE CONTRACT, OR THE SOLE, JOINT, ACTIVE, PASSIVE, GROSS OR CONCURRENT NEGLIGENCE, STRICT LIABILITY, BREACH OF CONTRACT OR DUTY, OR OTHER FAULT OF ANY MEMBER OF EITHER PARTY'S GROUP.

- d. **Anti-Indemnity and Insurance Savings Clause.** If any defense, indemnity or insurance provision contained in the Contract conflicts with, is prohibited by or violates public policy under any law determined to be applicable to a particular situation arising from or involving any Work hereunder, it is understood and agreed that the conflicting, prohibited, or violating provision shall be deemed automatically amended in that situation to the extent, but only to the extent, necessary to be in compliance with such applicable law.

10. INCIDENTAL OR CONSEQUENTIAL DAMAGES.

IT IS EXPRESSLY AGREED THAT THE SCHLUMBERGER GROUP SHALL NOT BE LIABLE TO THE CUSTOMER GROUP FOR ANY PUNITIVE, INCIDENTAL, CONSEQUENTIAL, INDIRECT OR SPECIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, ANY LOSS OF PROFITS, BUSINESS INTERRUPTION OR LOSS OF USE, LOSS OR DEFERRAL OF PRODUCTION, LOSS OF RIG TIME, LOSS OF DATA OR SAMPLES, OR LOSS RESULTING FROM DELAY, WHETHER DIRECT OR INDIRECT, SUFFERED BY CUSTOMER GROUP, REGARDLESS OF THE SOLE, JOINT, ACTIVE, PASSIVE, GROSS OR CONCURRENT NEGLIGENCE, STRICT LIABILITY, BREACH OF CONTRACT OR DUTY, OR OTHER FAULT OF ANY MEMBER OF SCHLUMBERGER GROUP. CUSTOMER SHALL WAIVE, RELEASE, PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS SCHLUMBERGER GROUP FROM AND AGAINST ANY AND ALL CLAIMS IN VIOLATION OF THIS SECTION 10.

11. **INSURANCE.** Each party, as indemnitor, agrees to support the indemnity obligations it assumes under these General Terms and Conditions, by obtaining at its own cost, adequate insurance for the benefit of the other party and its Group as indemnitees, with contractual indemnity endorsements. To the extent each party assumes liability hereunder, such insurance shall waive subrogation against the indemnified Group and its insurers and name the indemnified Group as additional insured(s) and loss payee, but only to the extent of liabilities assumed herein by the indemnifying party, and to the same extent such coverage shall be primary to that carried by the indemnified Group. Customer shall not self-insure without the written consent of Schlumberger. Notwithstanding the above, to the extent, and only to the extent, that the Texas Oilfield Anti-Indemnity Act (TOAIA) applies to these General Terms and Conditions, the Contract or the Work, and would render void, unenforceable, or void any obligations hereunder, including those set forth in Section 9 above, each party agrees to carry supporting insurance in equal amounts of the types and in the minimum amounts

GENERAL TERMS AND CONDITIONS

Ref. US.2019.08

required by the TOAIA. Where a party's insurance is deficient or unavailable for any reason, then such party agrees and shall be deemed to have approved self-funded or self-insurance. It is the intention of the parties hereto that the party to whom indemnity is owed hereunder will receive the benefit of such indemnity regardless of events that may happen, which could affect the insurance required to be obtained by the indemnifying party, after the Contract is entered into by Schlumberger and Customer.

- 12. LIMITATION OF LIABILITY.** Notwithstanding anything to the contrary herein, except as provided under Section 9.a.1 above, Schlumberger's liability arising from or in connection with the Contract (whether for indemnity, breach of contract or duty, negligence (whether sole, joint, active, passive, gross or concurrent), strict liability or otherwise) shall not in any circumstances exceed the full value of the consideration owed to Schlumberger under the Contract.
- 13. EMPLOYEE SOLICITATION.** Except with the prior written consent of Schlumberger, Customer shall not directly, indirectly or through third parties solicit, recruit or induce any Schlumberger employee, consultant or representative to leave, terminate or otherwise end his/her association with Schlumberger in order to become an employee, consultant or representative of Customer Group until at least one (1) year has elapsed from Customer's receipt of the final invoice for the Work.
- 14. INTELLECTUAL PROPERTY.** Schlumberger owns all rights to the proprietary intellectual property embodied in its Work or which are created in the course of providing such Work to Customer. Schlumberger does not transfer any ownership rights in such intellectual property to Customer and Customer shall not reverse engineer or cause any Schlumberger property or Products to be reverse engineered without Schlumberger's express written consent. Schlumberger will be liable for intellectual property infringement claims arising out of Customer's normal use of Schlumberger's Work but will not be liable for infringement that arises: (i) out of Customer's use of Schlumberger Work in combination with work, products or services not provided by Schlumberger; (ii) where Schlumberger Work has been specially modified, designed and/or manufactured to meet Customer's specifications; (iii) out of unauthorized additions or modifications to Schlumberger Work; or (iv) where Customer's use of Schlumberger Work does not correspond to Schlumberger published standards or specifications. Any Claim for intellectual property infringement shall be brought to Schlumberger in writing within ten (10) calendar days of service on Customer or this indemnity shall be void.
- 15. MISCELLANEOUS.**
- a. Orders: Schlumberger reserves the right to accept or reject any Order issued by Customer or any request for Work under a previously agreed Order.
- b. Force Majeure: Schlumberger shall not be liable for any delay or non-performance due to governmental regulation, labor disputes, hostile action, weather, fire, acts of God or any other causes beyond the reasonable control of Schlumberger.
- c. Governing Law: If Work is furnished offshore or on navigable waters, General Maritime laws shall govern the Contract; in those instances where the General Maritime Law does not apply, the laws of the State of Texas shall apply and govern the validity, interpretation, and performance of the Contract.
- d. Severability: Should any clause, sentence, or part of these General Terms and Conditions be held invalid, such holding shall not invalidate the remainder, and the General Terms and Conditions shall be interpreted as if the invalid clause, sentence, or part has been modified or omitted, if necessary, as required to conform to the jurisdiction purporting to limit such provision.
- e. Compliance with laws: Customer and Schlumberger respectively agree to comply with all laws, statutes, codes, rules, and regulations, which are now or may become applicable to operations covered by these General Terms and Conditions or arising out of the performance of the Work.
- 16. GENERAL COMMERCIAL CONDITIONS.** Commercial conditions, prices and technical specifications for the Work shall be documented in an Order. Unless otherwise set forth in the relevant Order or otherwise agreed to in writing by Schlumberger, the following commercial conditions shall apply:
- a. Product Sales Are Final: Orders placed by Customer and accepted by Schlumberger can only be canceled with Schlumberger's written consent.
- b. Return of Rentals: Rentals must meet the specifications set forth in the Order for return at the end of the rental period, and Schlumberger may verify compliance at the time of return to Schlumberger's designated facility. If Rentals do not meet the specifications at the time of return, they shall, at Schlumberger's sole discretion, be sold to Customer AS-IS, WHERE IS AND WITHOUT WARRANTY, at then-current rates for sale of the same, and will be returned to Customer at Customer's cost. Any waste found in Rentals upon return to Schlumberger will be returned to Customer or disposed of at Customer's cost.
- c. Buy-Back of Fluids: Where buy-back of Fluids is agreed, buy-back is conditioned on Fluids meeting the minimum specifications upon return to Schlumberger's designated facility. Buy-back is also subject to space availability at Schlumberger's designated facility. Fluids not meeting the minimum specifications will be returned to Customer at Customer's cost.
- d. Pricing Changes: Schlumberger has the right to revise pricing applicable to the Work at any time, including without limitation (i) whenever Schlumberger determines that market conditions support such revision; and (ii) whenever Schlumberger determines it

has been impacted by an increase in the cost of providing products and/or services, including commodities, trucking, labor, materials and/or ancillary products, materials or services related thereto (as well as associated taxes and tariffs), regardless of variation from any pre-job quotes, orders, estimates or the like that may have been submitted by Schlumberger. Such revisions may be adjusted post-job in accordance with the actual cost.

- e. Pricing Exclusions: Quoted prices do not include any of the following items, which may be charged as determined by Schlumberger for a given scope of work, and shall not be considered an exhaustive list: (i) mobilization and demobilization fees; (ii) stand-by (or crew and equipment) fees and demurrage (incurred by Schlumberger Group), which shall apply in any and all circumstances other than when due to the sole fault of Schlumberger; (iii) third party reimbursable fee of 20% (or as may otherwise be specified in Schlumberger's applicable price list); (iv) fuel surcharges (as may be specified in Schlumberger's applicable price list and subject to further adjustment based on the US Energy Information Administration (EIA) for US Retail On-Highway Diesel) and transportation/mileage fees; and (v) cancellation fees, return/restocking fees and buy-back fees.
- f. Additional Work: Backup tools, additional services/products and new technology items that are not specifically included in the work scope described in the Order shall be quoted upon request.
- 17. EXPORT COMPLIANCE.** Customer is advised that Work provided under the Contract is subject to the U.S. Export Administration Regulations, and diversion contrary to U.S. laws and regulations is prohibited. Customer agrees not to directly or indirectly export, import, or transmit the Work to any country or end user, or for any end use, that is prohibited by any applicable U.S. law or regulation (including without limitation, to those countries, from time to time, subject to embargo by the U.S. government). Additionally, Customer agrees not to directly or indirectly export, import, transmit, or use the Work contrary to the laws or regulations of any other governmental entity that has jurisdiction over such export, import, transmission, or use. Customer represents and warrants that neither the United States Bureau of Industry and Security nor any other governmental agency has suspended, revoked, or denied Customer's export privileges. Customer agrees not to use or transfer the Work for any use relating to nuclear, chemical, or biological weapons, or missile technology, unless authorized by the U.S. government by regulation or specific written license.
- 18. PUBLICITY.** Unless required by applicable laws, rules or regulations, neither party shall, or otherwise permit or cause any member of its Group to, issue or publish any press releases or make any public statements or publicize any information with respect to (i) the contents of these General Terms and Conditions, (ii) the Work contemplated to be performed under the Contract, and/or (iii) any transactions or occurrences arising as a result of the Work, without the prior written approval of the other party. Furthermore, the parties agree to confer with each other prior to any publication of any such information and to set forth such agreement in a separate writing.
- 19. CONFIDENTIALITY.** Customer agrees to hold in strict confidence all information provided by Schlumberger Group to Customer, all of which is Schlumberger confidential information. Customer will not disclose such confidential information to any third party without written authorization from Schlumberger, or except as required by law or legal process.
- 20. SCHLUMBERGER ENTITIES.** In the event that the parties enter into an Order subject to these General Terms and Conditions, Customer and Schlumberger agree, and it is the intent of these General Terms and Conditions, that the parties identified herein as Schlumberger shall not be jointly liable and shall only be severally liable to the extent of their respective obligations and liabilities hereunder. The specific party identified as Schlumberger in the applicable Order shall be the party responsible for the applicable Work. Each Schlumberger entity shall not be deemed a guarantor or surety with respect to the other Schlumberger entities' obligations and liabilities. This provision shall not impair Schlumberger Group's rights under Customer's indemnity and hold harmless obligations provided herein.

Scope of Supply



Document Information

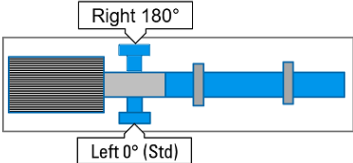
| | |
|-------------------------|--|
| Date | December 3, 2020 |
| Attention | Michael Devir |
| Revision | 0 |
| Customer | Keramida |
| End User | Keramida |
| Project | CO2 Sequestration |
| Subject | Water Injection HPS – Budgetary Proposal |
| Quote References | ECJG-00253 |



Service Conditions –

| | Normal |
|------------------------------|---|
| Fluid | Water |
| SG | 1.0 assumed |
| Fluid Temp | 80 degF assumed |
| Flow | 240 GPM |
| Suction Pressure | 50 psig assumed |
| Discharge Pressure | 1050 psig assumed |
| Differential Pressure | 1000 psi |
| Ambient Temperature | 20 – 100 degF. Outdoor, Unprotected assumed |
| Electrical | 3 phase/460 volt/TEFC |
| Altitude | Sea Level Assumed |

Scope of Supply Details

| | |
|-----------------------------------|---|
| Pump | Schlumberger Reda HPS |
| | Model: S235N 51 stages |
| | Details: <ul style="list-style-type: none"> • Stainless Steel Head and Base • Ni Resist Impellers/Diffusers • Carbon Steel Pump Housing • High Strength Monel Pump Shaft • Stainless Steel Spline Couplings • ARZ Bearing Configuration • HSN Elastomers |
| Thrust Chamber | 1 Bearing Thrust Chamber (Less Oil Cooler), with Standard Paint |
| Suction Flange | CS 6" 150# RF |
| Suction Flange Orientation |  <p>Please define orientation preference upon issue of PO - if different than the standard indicated above</p> |
| Discharge Flange | CS 4" 1500# RF |
| Mechanical Seal | John Crane Type 2 Non-Cartridge |
| Coupling and Guard | Metastream 7" API 610 Model TSCS-0135 7" SS disc spacer coupling w/ limited End Float Kit with aluminum non-sparking telescoping guard. |
| Base Plate | Schlumberger RedaHPS standard "LD" 3 Clamp, fabricated steel skid with pump clamps and Hardware Kit |
| Flush Plan | None |
| Testing | Non-witness Hydro Test (Pump, Intake, Discharge: 5 Min x 1.5 x MAWP on Water) Pump Performance Test (Per API RP11S Acceptance Criteria on Water, 5 Point) |
| Paint | Schlumberger RedaHPS standard paint specifications |
| Documentation | Schlumberger RedaHPS standard documentation package – electronic. Not for Approval |
| QCP (Quality Control Plan) | SLB Standard |
| Instruments | Ashcroft pressure transmitters (intake and discharge) Metrix vibration transmitter Junction Box & Piping: Nema 4X with all common wiring to the Junction Box via Dekoron Cabling |
| Motor | MOTOR: ABB, 250HP 460V 60HZ, 449TS, TEFC, BALL BRG, 3570 FLRPM, SD, NEMA PREMIUM, CW ROTATION, F1 See below for additional engineering details |



Motor Details -

| ENGINEERING DETAILS | |
|--------------------------|---------------------------|
| Attribute | Value |
| API/IEEE SPECIFICATIONS | NONE |
| APPROXIMATE WEIGHT (LBS) | 3045 |
| AREA CLASSIFICATION | SUIT FOR CLASS 1 DIV 2 T3 |
| BEARING RTD | NONE |
| BEARING TYPE | BALL |
| CLASSIFICATION | SEVERE DUTY |
| DIMENSION - C (IN) | 49.72 |
| DIMENSION - D (IN) | 10.99 |
| ENCLOSURE TYPE | TEFC |
| FRAME SIZE | 449TS |
| FREQUENCY (HZ) | 60 |
| FULL LOAD (AMPS) | 289 |
| FULL LOAD EFFICIENCY | .958 |
| FULL LOAD POWER FACTOR | .910 |
| FULL LOAD SPEED (RPM) | 3570 |
| HORSEPOWER RATING (HP) | 250 |
| INSULATION CLASS | F |
| INVERTER DUTY INSULATION | YES |
| JUNCTION BOX | OVERSIZED |
| MATERIAL/ROTOR | ALUM |
| MODIFICATIONS | CW ROTATION, F1 |
| NON DRIVING END BEARING | NOT INSULATED |
| PRIMARY VOLTAGE | 480 |
| PUMP END BEARING | NOT INSULATED |
| SERVICE FACTOR | 1.15 |
| SHAFT SIZE | 2.375 |
| SPACE HEATER | NONE |
| SPECIFICATION | SD NEMA PREMIUM |
| SUPPLIER | ABB |
| THERMOSTAT | NONE |
| VIBRATION TRANSDUCER | NONE |
| WINDING RTD | NONE |



Price and Lead Time

Skid Price and Lead time provided in quote ECJG-00253

Prices quoted are less Taxes, Freight, spares and commissioning services

Terms and Conditions

| Validity | 30 Days | | | | | | | | | | | | | | | | | | | |
|---|--|---|---|------------------------------------|---|--------------|-----------|-----------|---------------|---------------------|---------------------|---------------|---------------------|----------------------|---------------|---------------------|----------------------|--------------|----------------------|----------------------|
| Shipment | FCA (Free Carrier) Schlumberger REDA HPS facility - Bartlesville, Oklahoma, USA | | | | | | | | | | | | | | | | | | | |
| Freight & Packing | Cost plus 15% (client may arrange own shipping company) | | | | | | | | | | | | | | | | | | | |
| Payment Terms | Net 30 Days (subject to credit approval) | | | | | | | | | | | | | | | | | | | |
| Start-up | Start-up assistance is not included (standard labor rates apply) | | | | | | | | | | | | | | | | | | | |
| Change Orders | \$2000 USD per change order <ul style="list-style-type: none">Plus additional engineering cost & material cost & delivery | | | | | | | | | | | | | | | | | | | |
| Storage Fees: | 2% of order per month for each month in storage after completion | | | | | | | | | | | | | | | | | | | |
| Cancellation Policy: | <p>In the event of Order cancellation by Company after Order acceptance by Schlumberger, Schlumberger reserves the right to charge Company a cancellation fee as follows:</p> <table><tr><th>Days after Order accepted by Schlumberger</th><th>Charge for Schlumberger components</th><th>Charge for Non-Schlumberger 3rd party items</th></tr><tr><td>0 to 14 days</td><td>No charge</td><td>No charge</td></tr><tr><td>15 to 30 days</td><td>25% of quoted price</td><td>50% of quoted price</td></tr><tr><td>31 to 45 days</td><td>50% of quoted price</td><td>100% of quoted price</td></tr><tr><td>46 to 60 days</td><td>75% of quoted price</td><td>100% of quoted price</td></tr><tr><td>61 days plus</td><td>100% of quoted price</td><td>100% of quoted price</td></tr></table> <p>Effect of Order Cancellation</p> <ul style="list-style-type: none">-The cancellation charge will be invoiced upon Schlumberger's receipt of written notice (email acceptable) of Company's wish to cancel its Order.-Notwithstanding the number of days after Order acceptance, in the event the Product has been completed or Schlumberger has notified Company the Product is ready to ship, Schlumberger may charge Company one hundred percent (100%) of the quoted price.-The date of Order acceptance shall be the date of Schlumberger's written confirmation (email acceptable) of Schlumberger's receipt of Company's purchase order.-The 3rd party item price shall be the price stated on Schlumberger's quote, or cost +15%, and shall be supported by 3rd party invoice. The decision as to which price will be charged shall be at Schlumberger's discretion. Company's purchase order shall refer to Schlumberger's quote number. | | Days after Order accepted by Schlumberger | Charge for Schlumberger components | Charge for Non-Schlumberger 3 rd party items | 0 to 14 days | No charge | No charge | 15 to 30 days | 25% of quoted price | 50% of quoted price | 31 to 45 days | 50% of quoted price | 100% of quoted price | 46 to 60 days | 75% of quoted price | 100% of quoted price | 61 days plus | 100% of quoted price | 100% of quoted price |
| Days after Order accepted by Schlumberger | Charge for Schlumberger components | Charge for Non-Schlumberger 3 rd party items | | | | | | | | | | | | | | | | | | |
| 0 to 14 days | No charge | No charge | | | | | | | | | | | | | | | | | | |
| 15 to 30 days | 25% of quoted price | 50% of quoted price | | | | | | | | | | | | | | | | | | |
| 31 to 45 days | 50% of quoted price | 100% of quoted price | | | | | | | | | | | | | | | | | | |
| 46 to 60 days | 75% of quoted price | 100% of quoted price | | | | | | | | | | | | | | | | | | |
| 61 days plus | 100% of quoted price | 100% of quoted price | | | | | | | | | | | | | | | | | | |
| Terms & Conditions | Schlumberger General Terms & Conditions Apply | | | | | | | | | | | | | | | | | | | |

**Additional notes**

If overall skid length is greater than 40ft, the skid will be shipped as two separate units that require field assembly. Field assembly is outside the scope of supply. Skid make up can be carried out by client/distributor field personnel. Schlumberger field support can be quoted on request.

Schlumberger RedaHPS:

- Engineered Thrust Chamber for premium reliability, mechanical seal life & MTBF
- Single, double and triple thrust bearing designs within one housing design; up to 24,000 lbf thrust
- API610 7" spacer coupling with non-sparking guard
- Only one mechanical seal on low suction pressure side
- Standard external mount single, double and tandem mechanical seals; not internal mount
- API610 back pullout design for easy seal access; no need to interrupt discharge piping or pump
- Stainless steel catch pan and drain below thrust chamber and intake assembly
- Versatile skid designs for different motor frames and pump sizes; plus adjustable clamp locations
- Fabricated box steel frame skid and integral TC stand provides low shaft centerline, controls TC alignment and increases suction nozzle loading
- Full function unit test at factory is available; up to 2250 hp at 60 hz
- Horizontal Surface Pump Manufacturer Since 1940s
- Over 4500 Units Worldwide
- *RedaHPS "Power You Can Count On"*

We trust our proposal is complete. However, please call me should you have any questions.

Carlie Duhon Bumgardner

Account Manager

Schlumberger Artificial Lift

Mobile +1 318-426-5504

Email CDuhon3@slb.com

Web www.SLB.com

Company: Keramida
Engineer: Carlie Duhon Bumgardner

Project: HPS Design
Date: 12/2/2020

REDA HPS

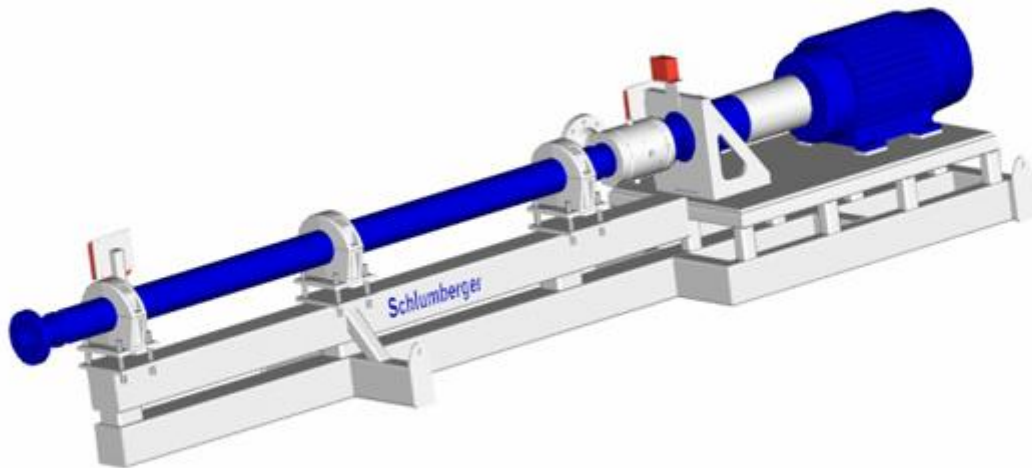
HORIZONTAL PUMPING SYSTEM

TECHNICAL DESIGN

Customer: Keramida
Project: HPS Design

Flow: 240 GPM
Boost Pressure: 1111.88 psi
Discharge Pressure: 1161.9 psig

Pump: S235N 51 stages
Motor: SIEMENS, 250 hp, 460 Volts, 60 Hz



Date: 12/2/2020

Input Values

Process Input Data

| | | |
|---------------------------|-------|------|
| Liquid Type | Water | |
| Specific Gravity | 1 | |
| Design Flow Rate | 240 | GPM |
| Design Suction Pressure | 50 | psig |
| Design Discharge Pressure | 1100 | psig |
| Design Boost Pressure | 1050 | psi |
| NOTES : | | |

System Input Data

| | | |
|---------------------|---------------|----|
| Input Voltage | | |
| Area Classification | Non Hazardous | |
| Ambient Temperature | 80 | °F |
| Liquid Temperature | 80 | °F |
| Input Frequency | 60 | |
| NOTES : | | |

Results Summary

Pump Summary

| | | | | |
|-------------------------|---------|-----|------------------|---------------------|
| Operating Frequency | 60 | Hz | Pump Type | S235N |
| Speed | 3570 | RPM | Stages | 51 |
| Power Required (@ Duty) | 201.9 | hp | Shaft Type | HIGH STRENGTH MONEL |
| Run out Power | 204.9 | hp | Pressure Rating | 5000 psig |
| Pump Efficiency | 76.85 | % | Shut in Pressure | 1531.8 psig |
| Boost Generated | 1111.88 | psi | TDH | 2564.71 ft |

Component Details

Motor

| | | |
|----------------------|---------------|-------|
| Classification | Non Hazardous | |
| Voltage | 460 | Volts |
| Shaft Power | 250 | hp |
| Altitude Adjusted HP | 250 | hp |
| Enclosure | TEFC | |
| Frame | 449TS | |
| Bearing Type | BALL | |
| NOTES : | | |

Thrust Chamber

| | | |
|----------------------|---------|-----|
| TC Rating | 5000 | lbf |
| Peak Downthrust | 2986.99 | lbf |
| Operating Downthrust | 2667.81 | lbf |
| NOTES : | | |

Seal

| | |
|-----------------|----|
| Seal Type | 2 |
| Cartridge Seal | NC |
| Seal Flush Type | |
| NOTES : | |

Skid Type

| | |
|---------------------|------|
| Model | |
| Overall Unit Length | 0 ft |
| NOTES : | |

Intake Flange

| | | |
|--------------------|-------------------|----|
| Size | 6 | in |
| Flange Class | 150 | |
| Configuration | RF | |
| Material | A105 CS | |
| Intake Orientation | 0 deg. (Standard) | |

Discharge Flange

| | | |
|---------------|---------|----|
| Size | 4 | in |
| Flange Class | 1500 | |
| Configuration | RTJ | |
| Material | A105 CS | |

Limits Summary

Process Input Data

| | | | | |
|-------------------|-------|-------|------------------|--------|
| Frequency | 60 | Hz | Controller kW | 195.48 |
| Voltage | 460 | Volts | Controller kVA | 212.48 |
| Motor Amps | 267 | Amps | PF at Controller | 0.92 |
| Motor Rating | 250 | hp | | |
| Pump Power Draw | 201.9 | hp | | |
| Motor Load Factor | 80.75 | % | | |

System Summary at Design Point

Pump

| | | |
|----------------------|--------|------|
| MAWP Rating | 5000 | psig |
| Discharge Pressure | 1161.9 | psig |
| Pressure Load Factor | 23.24 | % |
| Shaft Rating | 472.3 | hp |
| Required Power | 201.9 | hp |
| Shaft Load Factor | 42.75 | % |
| NPSHr | 25.72 | ft |

Thrust Chamber

| | | |
|----------------|-------|-----|
| TC Rating | 5000 | lbf |
| TC Load Factor | 53.36 | % |

Flanges

| | | |
|-----------------------|-------|------|
| Intake Rating | 285 | psig |
| Load Factor | 17.54 | % |
| Discharge Rating | 3705 | psig |
| Discharge Load Factor | 31.36 | % |

System Summary at Maximum Condition

Pump

| | | |
|----------------------|--------|------|
| MAWP Rating | 5000 | psig |
| Shutoff Pressure | 1531.8 | psig |
| Pressure Load Factor | 30.64 | % |
| Shaft Rating | 472.3 | hp |
| Peak Required Power | 204.9 | hp |
| Shaft Load Factor | 43.39 | % |
| NPSHr | 25.72 | ft |

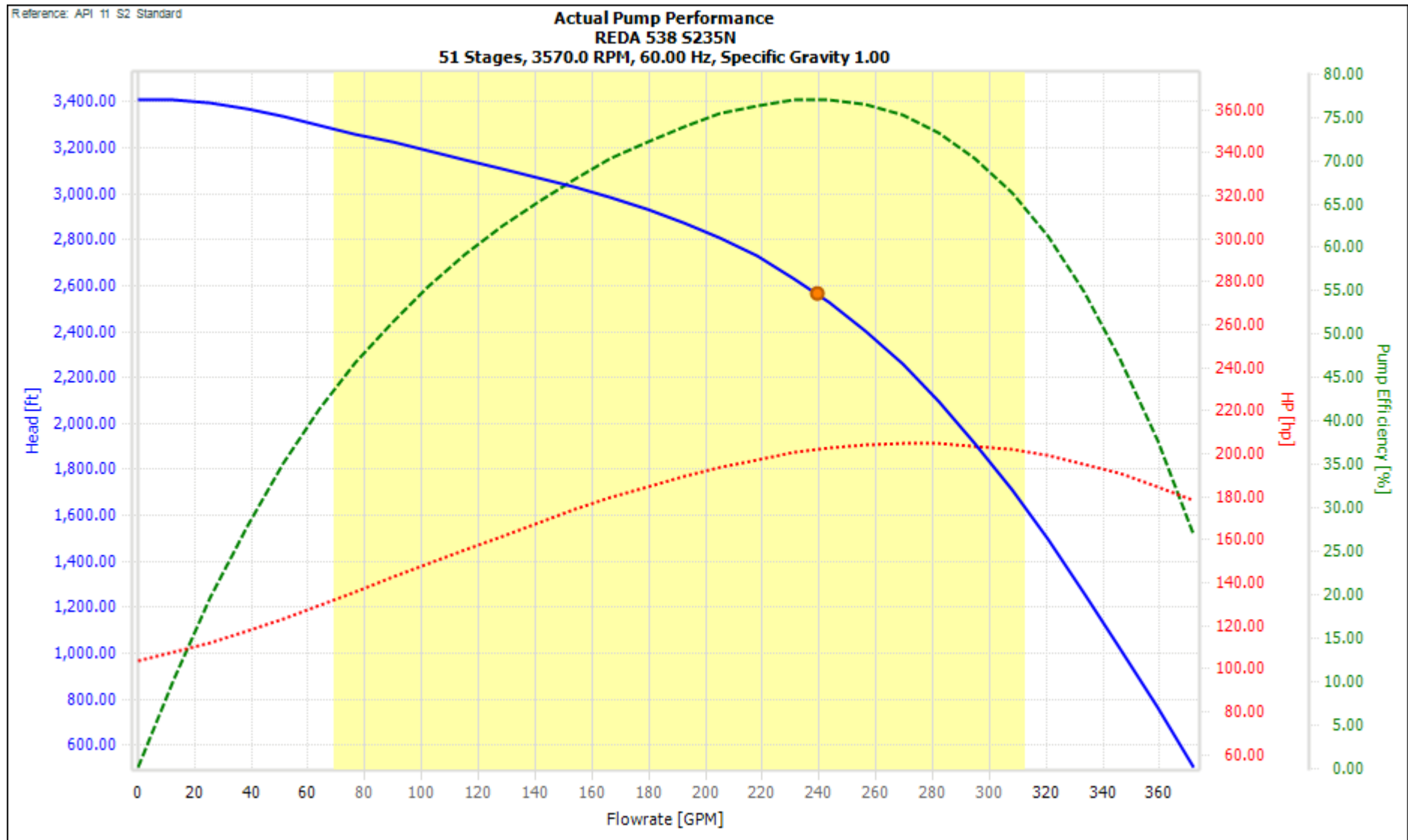
Thrust Chamber

| | | |
|----------------|-------|-----|
| TC Rating | 5000 | lbf |
| TC Load Factor | 59.74 | % |

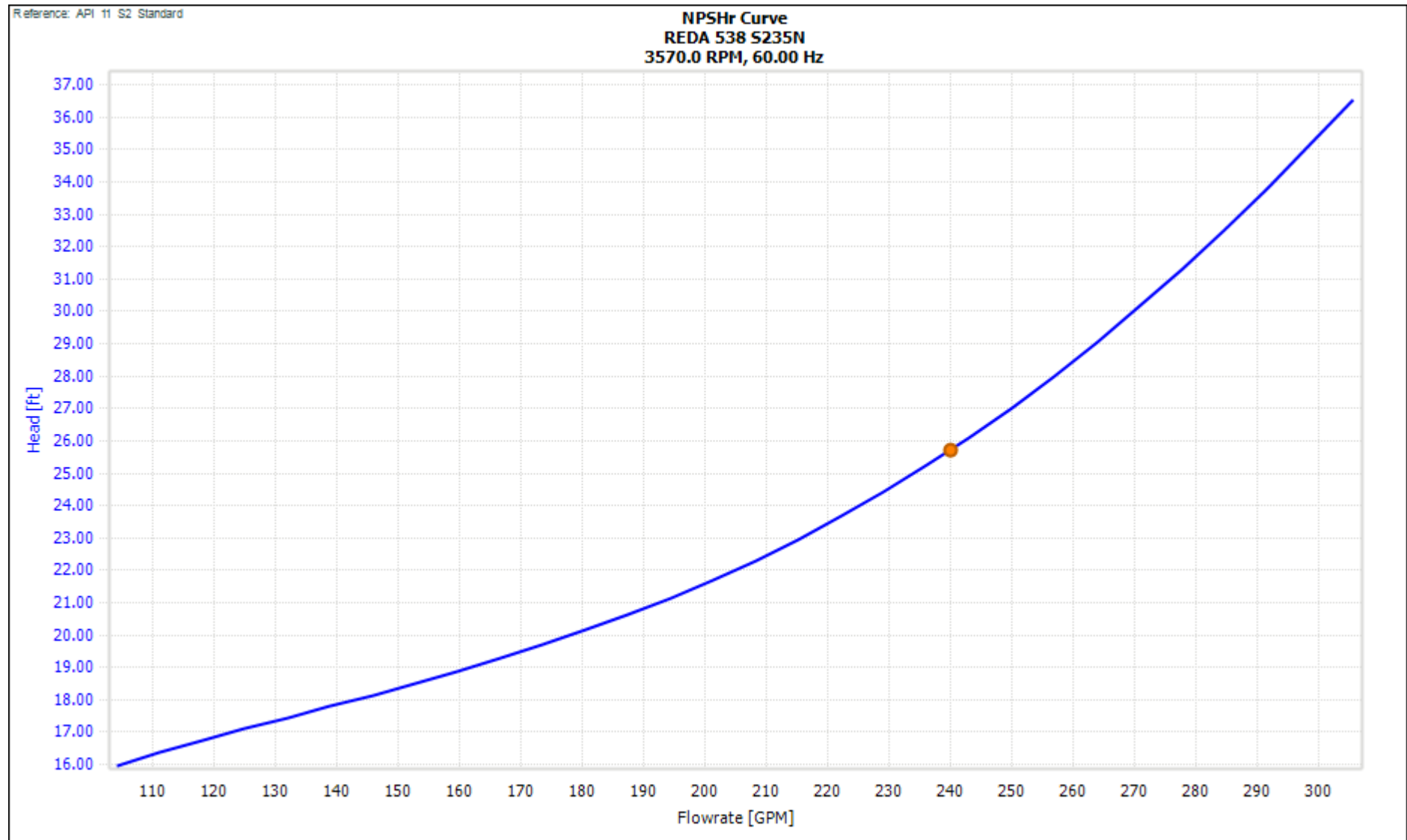
Flanges

| | | |
|-----------------------|-------|------|
| Intake Rating | 285 | psig |
| Load Factor | 17.54 | % |
| Discharge Rating | 3705 | psig |
| Discharge Load Factor | 41.35 | % |

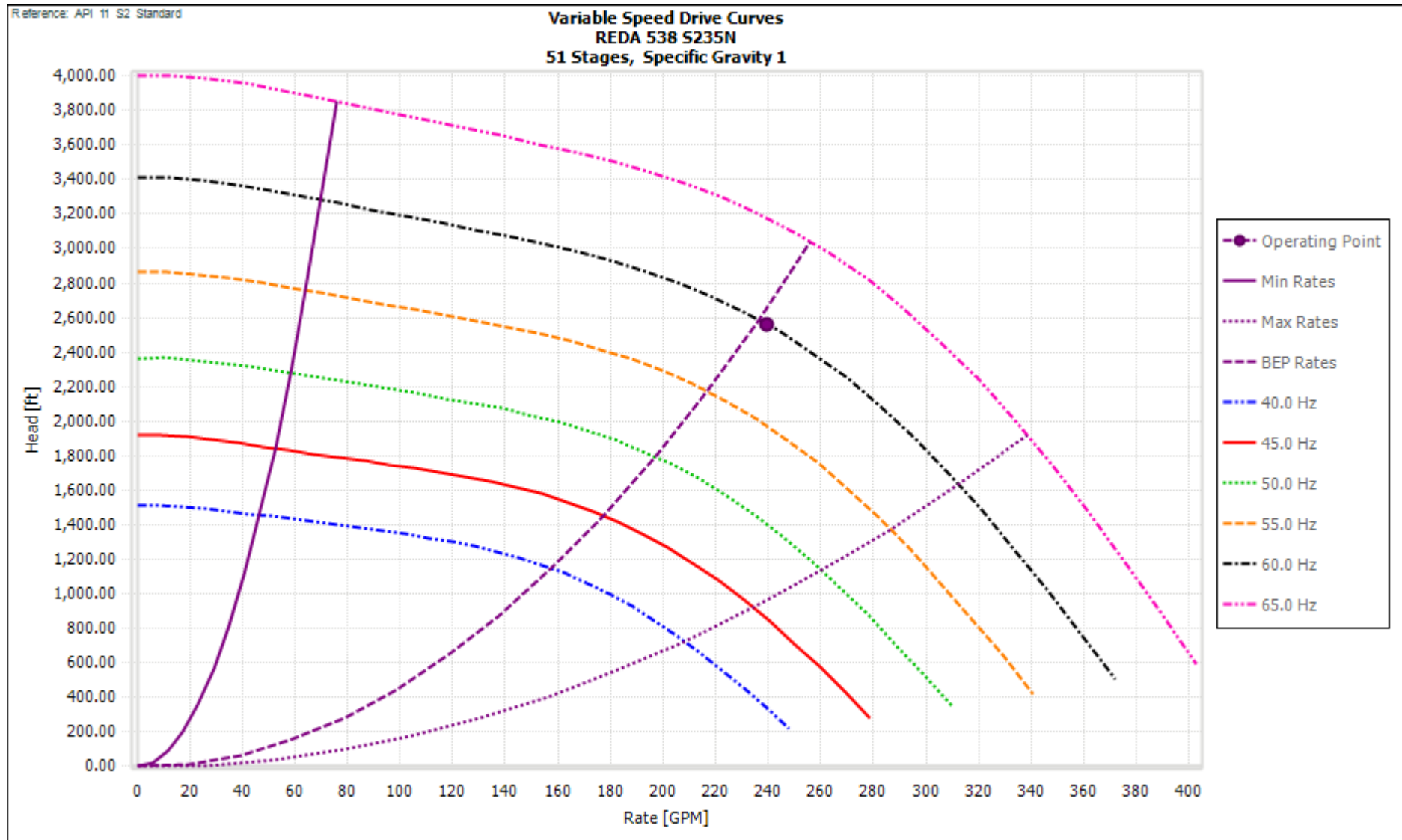
Actual Pump Curve



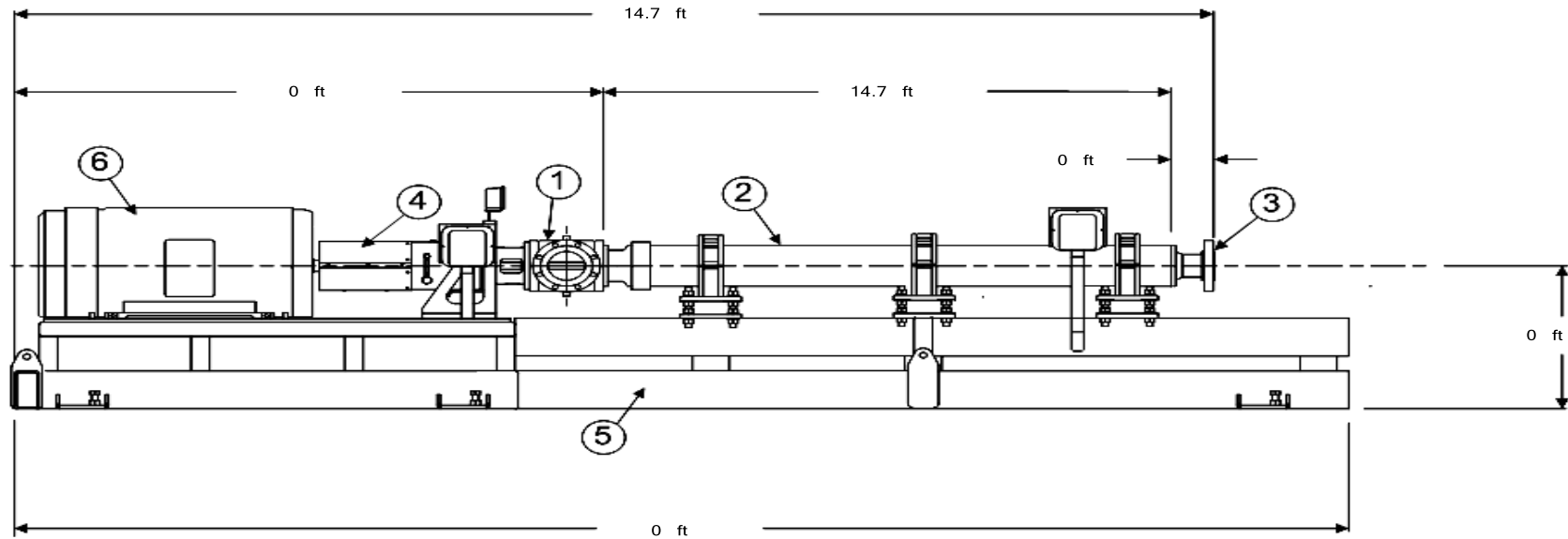
NPSHr Actual Pump Curve



VSD Curves Plot



Skid Diagram



HPS system is nonconfigurable, please contact engineering, Skid Weldment is missing.

| Parts List | | | | | Keramida | | |
|------------|-------------------|-----------|----------|-----------|--------------|-------------------------|-----------------|
| Item | Description | | | | HPS Design | | |
| 1 | Intake Flange: | 6 in | ANSI | 150 | Design Data | | |
| 2 | Pump: | Stage 51 | S235N | | Designed By: | Carlie Duhon Bumgardner | Length: 14.7 ft |
| 3 | Discharge Flange: | 4 in | ANSI | 1500 | Approved By: | | Width: 0 ft |
| 4 | Thrust Camber: | Bearing 1 | 5000 lbf | | Date: | 12/2/2020 | Weight: 0 lbf |
| 5 | Skid Assembly: | | Clamps 3 | | | | |
| 6 | Motor: | 250 hp | TEFC | 460 Volts | Reda-HPS | | |

For quotation purposes only, this drawing contains estimated dimensions and weights. Drawing not to scale. DO NOT CERTIFY

Confidential and trade secret. Do not disclose or reproduce without prior written approval from Manufacturer.

© Schlumberger 2006

Quote Number: **ECJG-00253**
Valid From: **03-Dec-2020** To: **02-Jan-2021**

Quote



| | | |
|---|---|--|
| Customer: KERamida | Well Name: WATER reinjection Field: County: State/Prov: Country: UWI Number: | External Ref: Ref Doc: PO: AFE: Cust Ref: Cust Cont #: Commercial Agreement: |
| Estimated Job Date: 01-Jan-0001 | SLB Location: 2192F | |
| | Rig: | |
| | | SLB Sales Rep: Carlie Duhon Bumgardner |
| Price Book: A9C6 / ALS_SEGREF_2006_USD_Products_NO MARKUP | | |

Service Instructions:

Keramida
Water Reinjection Project

Lead Time:
Drawings: 2-4 weeks ARO
Delivery: 12-14 weeks ARAD

THE ESTIMATED CHARGES AND DATA SHOWN BELOW ARE SUBJECT TO CORRECTION BY SCHLUMBERGER.

| SPN | Description | Qty | UOM | Price | Disc | Amount | Opt |
|-------------------|--|-----|-----|-----------|------|-----------|-----|
| 10 MISC | Top Level PN: TBD <i>S235N Pump; 51 stages</i> <i>1 Bearing TC</i> <i>Non-Cartridge Seal</i> <i>Ashcroft Intake and Discharge Pressure Transmitters</i> <i>Metrix Vibration Transmitter</i> <i>Engineering Fees Included</i> | 1 | EA | 50,000.00 | | 50,000.00 | |
| Requested Total | | | | | | 50,000.00 | |
| Optional Total | | | | | | | |
| Quote Total (USD) | | | | | | 50,000.00 | |

THE ESTIMATED CHARGES SHOWN ABOVE MAY BE EXCLUSIVE OF TAX AND THE FINAL INVOICE WILL INCLUDE ALL APPLICABLE TAXES.

UNLESS OTHERWISE SPECIFIED BY SCHLUMBERGER, THIS QUOTATION IS VALID FOR A PERIOD OF 30 DAYS FROM THE ABOVE QUOTE DATE, AND THE WORK WILL BE PERFORMED IN ACCORDANCE WITH THE ATTACHED GENERAL TERMS AND CONDITIONS, OR THE TERMS OF THE APPLICABLE MASTER SERVICE AGREEMENT IF ONE IS IN FORCE BETWEEN CUSTOMER AND SCHLUMBERGER. CUSTOMER'S WRITTEN ACCEPTANCE OF THE TERMS OF THIS QUOTE SHALL FORM A BINDING CONTRACT BETWEEN THE PARTIES UNDER THE TERMS OF THE ATTACHED GENERAL TERMS AND CONDITIONS OR THE APPLICABLE MASTER SERVICE AGREEMENT.

Signature of Customer Authorized Representative:

Signature of Schlumberger Representative:

Michael Devir

Date

Carlie Duhon Bumgardner

Date

**THE FOLLOWING GENERAL TERMS AND CONDITIONS CONTAIN INDEMNITY AND
CHOICE OF LAW PROVISIONS - READ CAREFULLY**

1. **ACCEPTANCE.** By ordering Schlumberger's services, equipment, or products, Customer voluntarily elects to enter into and be bound by these General Terms and Conditions, along with any commercial documents that accompany the Order.
2. **DEFINITIONS.**
- a. **Chemicals** – any chemicals, substances and Fluids, used or unused, or considered as waste or by-products, cuttings, or cavings, radioactive tracer material and other hazardous wastes (as defined pursuant to applicable law and including but not limited to any packaging, transportation or storage containers and/or materials) and residue resulting from, or incident to, Schlumberger's performance of the Work.
 - b. **Claim(s)** – Damage, loss, expense, liability, claims, demands and causes of action of every kind and character (including spousal and survivor's actions, all costs and expenses, and reasonable attorney fees associated therewith) including, but not limited to, special, punitive, exemplary, general, compensatory, direct, indirect, incidental, or consequential damages, either under common law, equity, statute, or otherwise, whether based on tort, contract, strict liability, or statutes that may or could be asserted including without limitation, actions in rem or in personam, civil or criminal actions and/or causes of action howsoever arising.
 - c. **Customer** – the person, firm or other entity to which any Work is supplied or provided by Schlumberger.
 - d. **Fluids** – chemicals, emulsions, or chemically treated fluids and residue, including but not limited to drilling fluids, completion fluids, displacement fluids, wellbore fluids, wellbore treatments, stimulation fluids, whether water, oil, or synthetic based.
 - e. **Group** – Either Schlumberger or Customer and its respective contractors, subcontractors, consultants, agents, invitees, co-venturers, co-owners, partners, investors, joint venturers, co-lessees, co-working interest owners, lessors, Customer's clients (as part of Customer Group), and its and their parents, affiliates, subsidiaries, and each of their respective officers, directors, managers, shareholders, members, representatives, servants, consultants, agents, employees and invitees.
 - f. **Order** – an oral or written request for Work, a Schlumberger quotation accepted by Customer and/or a service or purchase order document issued by Customer and accepted by Schlumberger, which together with these General Terms and Conditions constitute the **Contract** between Schlumberger and Customer. Schlumberger shall not be obligated to provide any Work before an Order is agreed to by both parties.
 - g. **Products** – equipment, goods, materials, tools, supplies, Chemicals and/or products or equipment sold or otherwise provided by Schlumberger to Customer.
 - h. **Rentals** – Customer's hiring of Products and/or equipment from Schlumberger for a period of time.
 - i. **Schlumberger** – the entity providing Work to Customer, which may be: **Schlumberger Technology Corporation**, a Texas corporation, for and on behalf of itself and its US affiliates (excluding Western Geco LLC); and/or **M-I L.L.C.**, a Delaware limited liability company, for and on behalf of itself and its US affiliates; and/or **Smith International, Inc.**, a Delaware corporation, for and on behalf of itself and its US affiliates; and/or **Cameron International Corporation**, a Delaware corporation, for and on behalf of itself and its US affiliates.
 - j. **Services** – services provided by Schlumberger to Customer, including Products and personnel customarily required to provide such services.
 - k. **Work** – Products, Services and/or Rentals.

3. **INVOICING AND PAYMENT TERMS.** Customer acknowledges that Schlumberger's payment terms are cash in advance unless the value of the Work is supported by Customer credit approved by Schlumberger prior to the transaction. Customer also acknowledges that Schlumberger, in its sole discretion, may refuse to grant Customer the right to request Work on credit and/or may rescind the right to request Work on credit at any time. In the event that Customer's credit account with Schlumberger becomes delinquent, Schlumberger shall have the right to require, at its sole discretion, payment in advance, an irrevocable letter of credit, or bank guarantee as a condition to continue performing any ongoing Work or accepting any additional Work.

For transactions not supported by Schlumberger approved credit, Schlumberger's invoice will be issued upon receipt of full payment from Customer. If Customer requires any supporting documents or information (e.g. order #, AFE #, etc.) to be submitted with Schlumberger's invoices, then such requirements must be agreed in the Order before the Work is provided. Unless otherwise specifically agreed in an Order, the following invoicing conditions shall apply to Work for which credit has been approved:

- a. Schlumberger may invoice Customer for each portion or stage of the Work, as described and priced in the Order, as soon as practicable and without frequency restrictions.
- b. Schlumberger may invoice Customer for Products as follows: fifty percent (50%) of the sale price immediately upon receipt and acceptance of an Order, and the remaining fifty percent (50%) immediately upon delivery of the Products.
- c. Schlumberger may invoice Customer for Rentals in advance, as follows: one hundred percent (100%) of the rental price for the initial rental period immediately upon receipt and acceptance of an Order. In the event the rental is extended beyond the initial rental period or the scope is expanded, Schlumberger will submit a subsequent invoice to Customer for an amount equal to one hundred percent (100%) of the additional rental price to cover such extended period or expanded scope.
- d. Schlumberger may invoice Customer for any and all reimbursable items in advance.

Schlumberger's invoice shall be deemed correct and shall evidence Customer's acceptance of Work delivered, unless Schlumberger receives prompt written notice of any disputed items within five (5) business days after the date of the invoice. Such notice shall explain the reason for the dispute in detail, along with any supporting documentation of Customer's position, and Customer and Schlumberger will meet in good faith within fifteen (15) calendar days from Schlumberger's receipt of the notice to resolve the dispute. If an invoice is disputed, however, Customer agrees to pay Schlumberger any undisputed portion of that invoice as set forth below and without delay. Upon settlement of the dispute, Customer shall immediately pay to Schlumberger all amounts agreed by the parties to be due with respect to the disputed amount(s) and Schlumberger shall make the appropriate corrections regarding the disputed amounts by issuing, as applicable, a credit or debit note to Customer. Customer shall have no right to withhold or offset payments, except to the extent it is agreed as a result of the foregoing dispute resolution procedure. Customer waives all rights to dispute any item (or submit a claim for amounts invoiced) where Schlumberger has not received written notification of a disputed item within two (2) years from the date such Work is actually provided.

Customer shall pay the total invoice amount without any payment retentions (other than taxes which must be withheld as mandated by tax legislation). Payment shall be made by electronic transfer of funds to Schlumberger's designated bank account, or by other payment means mutually agreed, at Schlumberger's office in Houston, Texas, unless another office location has been designated in the payment instructions contained in an Order or an invoice. The payment for any transaction for which credit has been approved shall be due to, and received by, Schlumberger, on or before the thirtieth (30th) day from the date of the invoice.

When payment is electronic (e-commerce), Customer and Schlumberger may agree to mutually beneficial electronic processes for executing business transactions, including but not limited to the system-to-system exchange of purchase orders, field tickets, bills of lading, invoices and electronic catalogs. Such electronic transactions shall adhere to industry accepted standards and processes (Petroleum Industry Data Exchange (PIDX)). Customer, Schlumberger, and any contracted third party technology providers will execute a standard Electronic Data Agreement between Customer and OFS Portal, LLC or a mutually agreed upon Electronic Data Agreement developed around the OFS Portal, LLC agreement to govern said electronic transactions.

Customer agrees that Schlumberger is entitled to charge and accrue interest on any past due balance (including amounts that are disputed by Customer but are found to be due and owing) at the rate of 1.5% per month or the maximum interest allowable by applicable state or federal laws, if such laws limit interest to a lesser amount. If Schlumberger employs a collection agency or attorneys to collect any outstanding invoice(s) or enforce its rights under these General Terms and Conditions, Customer agrees to pay all actual expenses of collection, all collection agency fees, and all attorneys' fees and court costs, including, but not limited to, attorneys' fees incurred in connection with litigation, mediation, arbitration, bankruptcy, or other proceedings. In the event that Customer's payment of Schlumberger's invoice is received by Schlumberger after the due date, any price discount will be unearned, and Schlumberger has the right to revoke any and all discounts previously applied in arriving at the net invoice price. Upon revocation, the full invoice price, without discount, will become immediately due and owing and subject to collection.

As used herein, the term "**Receivables**" shall mean: all of Customer's rights and interests in (a) all accounts and (b) all general intangibles, whether now existing or hereafter arising, and all proceeds thereof, relating to the properties for which Schlumberger provides Work. Customer hereby grants a security interest in Customer's Receivables to secure Customer's obligations to Schlumberger, whether now existing or hereafter arising. Customer shall promptly support Schlumberger as may be necessary to file all instruments (including financing statements), in order to perfect, preserve, protect and renew the security interests granted herein on all Receivables.

4. **TAXES.** Customer shall pay or reimburse Schlumberger for, to the extent allowed by applicable laws and regulations, any and all taxes or other levies (other than Schlumberger's income taxes) imposed by any government, governmental unit or similar authority with respect to the charges made or payments received by Schlumberger in connection with the Work.

5. **INDEPENDENT CONTRACTOR.** Schlumberger is and shall be an independent contractor with respect to the performance of Work, and neither Schlumberger nor anyone employed by Schlumberger shall be the agent, representative, employee or servant of Customer in the performance of such Work or any part thereof. When Schlumberger's employees (defined to include Schlumberger's direct, borrowed, special, or statutory employees) are covered by the Louisiana Workers' Compensation Act, La R.S. 23:1021 *et seq.*, Customer and Schlumberger agree that all Work and operations performed by Schlumberger and its employees pursuant to this Contract are an integral part of and are essential to the ability of Customer to generate Customer's goods, products and Services for purposes of La R.S. 23:1061 (A)(1). Furthermore, Customer and Schlumberger agree that Customer is the statutory employer of Schlumberger's employees for purposes of La R.S. 23:1061 (A)(3). Irrespective of Customer's status as the statutory employer or special employer (as defined in La R.S. 23:1031 (C)) of Schlumberger's employees, Schlumberger shall remain primarily responsible for the payment of Louisiana workers' compensation benefits to its employees, and shall not be entitled to seek contribution for any such payments from Customer.

OBLIGATIONS OF CUSTOMER.

- a. **Well Conditions: Notification of Hazardous Conditions.** Customer, having custody and control of the well and superior knowledge of the conditions in and surrounding it, shall provide Schlumberger with all necessary information to enable Schlumberger to perform its Services safely and efficiently. Schlumberger's Products, Rentals and Services are designed to operate under conditions normally encountered in the well bore; however, if hazardous or unusual conditions exist, Customer shall notify Schlumberger in advance and make special arrangements for servicing such wells.
- b. **Chemicals.** The handling, transportation, treatment and/or disposal of any Chemicals, used in or resulting from Schlumberger's performance of the Work, is the sole responsibility of Customer, including when such Chemicals are returned to the surface of the land or sea from below the rotary table. In no event shall Schlumberger be considered the generator of Chemicals or samples, irrespective of any handling transportation, treatment, or disposal provided by Schlumberger. Customer understands and agrees that all Chemicals and samples are the property of Customer and that Customer is the generator of the Chemicals and samples irrespective of any handling, transportation or treatment by Schlumberger. Unless Customer has a separate agreement with Schlumberger for the storage of samples, Schlumberger may return samples to Customer upon completion of Schlumberger's analysis or dispose of samples, at Customer's cost, in accordance with Customer's instructions. All Chemicals and fluids in the drilling rig's tanks, piping, valves, and pumps, and in the borehole and reserve pit (or frac tanks where there is not a reserve pit) are not in Schlumberger's possession or control, and that Schlumberger is not responsible for such. Customer agrees that it will handle, transport and dispose of any such Chemicals and samples under Customer's name and waste generator number, in accordance with all applicable federal, state and local laws and regulations. **CUSTOMER HEREBY AGREES NOT TO ASSERT ANY CLAIM OR BRING ANY COST RECOVERY ACTION AGAINST SCHLUMBERGER GROUP AND SHALL WAIVE, RELEASE, PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS SCHLUMBERGER GROUP FROM AND AGAINST ANY AND ALL CLAIMS IN CONNECTION WITH THE USE, HANDLING, TREATMENT, STORAGE, TRANSPORTATION AND/OR DISPOSAL OF CHEMICALS, REGARDLESS OF THE SOLE, JOINT, ACTIVE, PASSIVE, GROSS OR CONCURRENT NEGLIGENCE, STRICT LIABILITY, BREACH OF CONTRACT OR DUTY, OR OTHER FAULT OF ANY MEMBER OF SCHLUMBERGER GROUP.** Schlumberger shall not be responsible for the signing of manifests or for the storage, transportation, treatment or disposal of Chemicals.
- c. **Radioactive Sources.** If any radioactive source is lodged or lost in a well or at the well site or while being transported by or while under the custody or control of Customer Group, Customer shall immediately notify Schlumberger and exert its best efforts to locate and recover the source and take all necessary precautions to avoid breaking, damaging or rupturing the source. If the source is irretrievable, or if it or its container is damaged or ruptured, Customer shall immediately notify Schlumberger and comply with all applicable laws and regulations including isolating and marking the location of the source. Customer shall not attempt to recover a sealed source in a manner that, in Schlumberger's opinion, could result in its rupture. If the source ruptures, Customer shall minimize any resulting contamination and radiation exposure, and decontaminate the environment, equipment and personnel.
- d. **TENORM.** Any equipment used, whether it belongs to Contractor Group, Customer Group or a Third Party, that is intended to be returned to Contractor's storage facility, base, service center or field site will be tested for Technically Enhanced Naturally Occurring Radioactive Material ("TENORM") prior to backloading from the site. This shall be done irrespective of ownership of the equipment and regardless of whether Contractor Group, Customer Group, or a Third Party uninstalls the equipment. Any equipment found to be contaminated by TENORM shall be the responsibility of Customer and shall be decontaminated by Customer at its own expense. If disposable personal protective equipment ("PPE") is used for the handling of TENORM contaminated equipment at the site, for example, Tyvek coveralls, latex gloves, etc, such PPE shall be left at the site for disposal by Customer and be provided for or reimbursed by Customer. Once decontaminated, equipment shall be transported to Contractor's storage facility, base, service center or field site with appropriate documentation from Customer's nominated waste management contractor verifying decontamination. All costs associated with decontamination, storage, transportation, and disposal of TENORM contaminated equipment and PPE shall be for Customer's account. Moreover, if Contractor Group's equipment becomes contaminated by TENORM to a level where it is no longer economical to clean or decontaminate, Customer shall take custody of such equipment and reimburse Contractor for the full new replacement cost of such equipment.
- e. **Fishing Operations.** Customer shall assume the entire responsibility for operations in which Customer Group or a third party fish or attempt to fish for the equipment of any member of Schlumberger Group or perform any operation that may jeopardize the retrievability or the integrity of equipment containing radioactive sources. Schlumberger will, without assuming liability and if so requested by Customer, render assistance for the recovery of such equipment. Customer shall use commercially reasonable efforts to attempt recovery of Schlumberger Group's equipment.

- f. **Change Orders.** Customer may, with reasonable notice, request to change the Work to be provided under an Order by issuing a written change order authorization document (referred to herein as the "**Change Order**"). If upon receiving a Change Order, Schlumberger determines that there is any impact that increases the cost or affects the time to perform or provide the Work, Schlumberger shall submit a proposal to Customer specifying the pricing

7. WARRANTY FOR PRODUCTS, RENTALS AND SERVICES.

- a. Schlumberger warrants that all Services provided hereunder shall be performed in a good and workmanlike manner in accordance with good oilfield practices and that it shall exercise diligence to ensure the correctness and safe transport of all log, test and other data. Schlumberger will give Customer the benefit of its best judgment based on its experience interpreting information and making written or oral recommendations concerning logs or tests or other data, type or amount of material or service required, manner of performance or predicting results. Nevertheless, all such recommendations or predictions are opinions only and, in view of the impracticability of obtaining first-hand knowledge of the many variable conditions, the reliance on inferences, measurements and assumptions which are not infallible, and/or the necessity of relying on facts and supporting services furnished by others, **NO WARRANTY IS GIVEN CONCERNING THE ACCURACY OR COMPLETENESS OF ANY LOG, TEST, RESERVOIR OR SEISMIC DATA (INCLUDING SOFTWARE MODELS), OR OTHER DATA, THE EFFECTIVENESS OF MATERIAL USED, RECOMMENDATIONS GIVEN, OR RESULTS OF THE SERVICES RENDERED.** **SCHLUMBERGER SHALL NOT BE HELD RESPONSIBLE FOR ANY LOSS OR DAMAGE ARISING FROM THE RESULTS AND/OR RECOMMENDATIONS SUGGESTED BY SUCH WORK, NOR IS THE WORK INTENDED TO PROVIDE THE BASIS FOR ANY DECISIONS SUBSEQUENTLY MADE BY CUSTOMER, WHICH ARE AND SHALL REMAIN CUSTOMER'S SOLE RESPONSIBILITY. SCHLUMBERGER WILL NOT BE RESPONSIBLE FOR ACCIDENTAL OR INTERNATIONAL INTERCEPTION OF OR TAMPERING WITH DATA BY OTHERS, NOR DOES SCHLUMBERGER GUARANTEE THE SAFE STORAGE OR THE LENGTH OF TIME OF STORAGE OR AGAINST LOSS OF ANY DIGITAL TAPES, OPTICAL LOGS OR PRINTS, OR OTHER SIMILAR PRODUCTS OR MATERIALS.** Any warranty claim for Services must be made prior to Schlumberger's demobilization from the well site or for Services to repair equipment, within seventy two (72) hours after installation of such repaired equipment.
- b. Schlumberger warrants that Products furnished hereunder shall conform to the type and specifications represented by Schlumberger. Schlumberger reserves the right, at its sole discretion, to use new, used or refurbished parts in the assembly of its Products. Schlumberger warrants all its Products sold to be free of material defects in material and workmanship for a period of twelve (12) months from the date of delivery to the location stated in the Order, provided that notice of any defects is received by Schlumberger within the warranty period. Rentals are warranted only for the rental period. The above warranty does not apply to Products that have been affected by normal wear and tear, modified at Customer's request, supplied by Customer or purchased by Schlumberger at Customer's request, subjected to improper handling, storage, application, installation, operation or maintenance by anyone other than Schlumberger, and/or damaged by aggressive fluids, lightning, vandalism, or improper voltage supply or force majeure. No warranty is given to rapidly wearing Products or consumables. Schlumberger does not warrant or guarantee the results of the use of Rentals. Well conditions which prevent satisfactory operation of Rentals do not relieve Customer of its responsibilities for payment of the rental prices and other costs agreed upon in the applicable Order.
- c. Schlumberger's sole liability and Customer's exclusive remedy under the foregoing warranties is expressly limited to the repair, replacement or the refund of an equitable portion of the applicable purchase or rental price, at Schlumberger's sole option, of Products, Rentals or Services which prove to be defective within the warranty period and shall not include claims for labor costs, non-productive time, expenses of Customer resulting from such defects, including but not limited to removal or reinstallation of Products or the costs of heavy lifting or vessel /rig time, recovery under general tort law or strict liability or for damages resulting from delays, loss of use, or other direct or indirect, incidental or consequential damages of any kind. A Customer claim pursuant to this warranty shall be made immediately upon discovery and confirmed in writing within thirty (30) days after discovery of the defect. Where items claimed to be defective are determined not to be defective or to be defective as a result of Customer Group's use of the item, Schlumberger may invoice the service call to Customer. Defective items must be held for inspection or returned to the original Schlumberger delivery point upon request. Schlumberger shall have the right to inspect the Products claimed to be defective and shall have the right to determine the cause of such defect. Returned Products shall become the property of Schlumberger. In no event shall Schlumberger be liable for the cost of substitute products, services, or rentals obtained by Customer from others to cover any Product, Service or Rental which is defective or otherwise not in compliance with the applicable Order.
- d. Notwithstanding anything to the contrary herein, with regard to any services, materials, products or equipment furnished by contractors, subcontractors, vendors and/or suppliers of Schlumberger Group, Schlumberger's liability shall be limited to the assignment of such contractors, subcontractors, vendors- and/or suppliers' warranties to Customer, to the extent such warranties are assignable.

THE FOREGOING WARRANTIES FOR SERVICES, PRODUCTS AND RENTALS ARE IN LIEU OF ALL OTHER WARRANTIES, WHETHER ORAL, WRITTEN, EXPRESS, IMPLIED OR STATUTORY. IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY SHALL NOT APPLY. SCHLUMBERGER'S WARRANTY OBLIGATIONS AND CUSTOMER'S REMEDIES THEREUNDER (EXCEPT AS TO TITLE) ARE SOLELY AND EXCLUSIVELY AS STATED HEREIN.

8. TITLE AND RISK OF LOSS

- a. Unless otherwise agreed between the parties in an applicable Order, title to and risk of loss for Products sold (other than Fluids, will pass to Customer upon the earlier of payment, factory acceptance test (or other acceptance testing) or delivery to Customer's designated carrier at Schlumberger's manufacturing facility. The prices of Products exclude any costs of transportation, handling, insurance or any other costs for delivery beyond Schlumberger's manufacturing facility set forth in the quotation or applicable Order or other document as agreed to by Customer. At Customer's request, Schlumberger may arrange for shipment of Products to a location designated by Customer, and Customer will pay or reimburse Schlumberger for all freight, preparation, and in-transit insurance costs so incurred by Schlumberger. At Customer's request, subject to storage space availability and upon mutual agreement on storage fees, Schlumberger may agree to a bill-and-hold arrangement where Schlumberger would temporarily store Products sold to Customer, but Customer agrees that in such a case the title to and risk of loss for Products sold and stored will pass to and remain with Customer upon delivery to Schlumberger's designated storage facility, regardless of when the Products are ultimately delivered to Customer. In the event that purchased or repaired Products not subject to a bill-and-hold arrangement are left at a Schlumberger facility for over thirty (30) days, Schlumberger reserves the right at its sole discretion to charge storage fees to Customer and/or to consider the Products abandoned and sell them for scrap or otherwise dispose of them at Customer's cost.
- b. Title to and risk of loss for cement and stimulation fluids sold will transfer to Customer upon blending or deployment into the well or Customer's equipment connected to the well. Title to and risk of loss for Fluids, other than cement and stimulation fluids, will transfer to Customer (i) upon delivery to Customer's carrier, (ii) upon delivery to Customer's location, or (iii) upon blending, whichever occurs first. Title to and risk of loss for rented Fluids will transfer back to Schlumberger upon Schlumberger's written acceptance into its inventory, provided returned Fluids meet the minimum specifications set forth in the Order; however, if the specifications are not met, Customer shall pay Schlumberger the full sale price for the rented Fluids as would be applicable in case of a sale of the same.

- c. The time, method, place or medium of payment will not limit Schlumberger's rights in and to the Products until payment has been received in full. On all Orders, Schlumberger shall retain a security interest in the Products, irrespective of attachment to the land or equipment of Customer or any third party, to the extent of any unpaid balance of the purchase price therefor, and Schlumberger may use all reasonable efforts to retain and/or obtain possession of such Products until such unpaid balance has been received in full and accepted by Schlumberger.

9. INDEMNITIES

a. Personnel and Property

1. **SCHLUMBERGER SHALL BE RESPONSIBLE FOR AND HEREBY AGREES TO WAIVE, RELEASE, PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS CUSTOMER GROUP FROM AND AGAINST ANY AND ALL CLAIMS ARISING OUT OF OR IN CONNECTION WITH DAMAGE TO OR LOSS OR DESTRUCTION OF PROPERTY OF OR THE PERSONAL INJURY, ILLNESS OR DEATH OF ANY MEMBER OF SCHLUMBERGER GROUP ARISING OUT OF OR IN CONNECTION WITH THE CONTRACT AND/OR THE WORK PROVIDED HEREUNDER.**
2. **CUSTOMER SHALL BE RESPONSIBLE FOR AND HEREBY AGREES TO WAIVE, RELEASE, PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS SCHLUMBERGER GROUP FROM AND AGAINST ANY AND ALL CLAIMS ARISING OUT OF OR IN CONNECTION WITH DAMAGE TO OR LOSS OR DESTRUCTION OF PROPERTY OF OR THE PERSONAL INJURY, ILLNESS OR DEATH OF ANY MEMBER OF CUSTOMER GROUP ARISING OUT OF OR IN CONNECTION WITH THE CONTRACT AND/OR THE WORK PROVIDED HEREUNDER.**

- b. **Special Indemnity. NOTWITHSTANDING ANYTHING TO THE CONTRARY HEREIN, CUSTOMER ASSUMES ALL LIABILITY FOR AND AGREES TO WAIVE, RELEASE, PROTECT, DEFEND, INDEMNIFY, AND HOLD HARMLESS SCHLUMBERGER GROUP FROM AND AGAINST ALL CLAIMS BROUGHT BY OR ON BEHALF OF ANY MEMBERS OF CUSTOMER GROUP, SCHLUMBERGER GROUP OR ANY THIRD PARTY ARISING OUT OF OR IN CONNECTION HEREWITH FOR PROPERTY DAMAGE, PERSONAL INJURY, ILLNESS, DEATH OR LOSS THAT RESULTS FROM: (I) FIRE, EXPLOSION, SEEPAGE, BLOW-OUT, CRATERING, PRESSURE CONTROL OPERATIONS, INDUCED SEISMICITY EVENTS, WILD-WELL OR WORK PERFORMED TO CONTROL A WILD-WELL INCLUDING, BUT NOT LIMITED TO: DAMAGE TO, LOSS OF, DESTRUCTION AND/OR REPLACEMENT OF, OR RELEASE OR ESCAPE OF SUBSTANCES FROM, ANY PROPERTY, EQUIPMENT, DRILLING RIG/UNIT/VESSEL/PLATFORM OR OTHER FIXED OR FLOATING STRUCTURE, INCLUDING OIL/GAS PRODUCTION FACILITIES OR PIPELINES, AT OR AROUND A SITE (INCLUDING ANY DOWNTIME, REMEDIATION, OR RECOVERY TIME); (II) POLLUTION, AND/OR CONTAMINATION EMANATING FROM ANY AND ALL WELLS, WELL BORES AND/OR RESERVOIRS OR RESULTING FROM FRACTURING SERVICES OR ANY WORK, OR RADIATION DAMAGE (INCLUDING ENVIRONMENTAL POLLUTION, CONTAMINATION OR DAMAGE) RESULTING FROM SCHLUMBERGER GROUP'S RADIOACTIVE TOOLS OR EQUIPMENT WHILE BELOW THE SURFACE OF THE LAND OR, IN THE EVENT OF CONTAMINATION ORIGINATING ABOVE THE SURFACE OF THE LAND, WHEN THE RADIOACTIVE SOURCE IS UNDER THE CUSTODY OR IN THE CONTROL OF ANY MEMBER OF THE CUSTOMER GROUP; AND POLLUTION OR CONTAMINATION, CAUSED BY CUSTOMER GROUP'S FAILURE TO PROPERLY HANDLE, TREAT, TRANSPORT, USE OR DISPOSE OF ANY CHEMICALS AS REQUIRED BY SECTION 6.b HEREOF OR OTHERWISE, INCLUDING CONTAINMENT, CLEAN-UP, DISPOSAL AND REMEDIATION OF THE POLLUTANT AND CONTAMINATION, WHETHER OR NOT REQUIRED BY AN APPLICABLE FEDERAL, STATE OR LOCAL LAW OR REGULATION; (III) DAMAGE TO WELL(S), BOREHOLE(S), RESERVOIRS OR UNDERGROUND DAMAGE, INCLUDING BUT NOT LIMITED TO DAMAGE OR INJURY RESULTING FROM FRACTURING SERVICES, LOSS OF OIL, GAS, OTHER MINERAL SUBSTANCES OR WATER, OR THE WELL-BORE ITSELF, SURFACE DAMAGE ARISING FROM SUBSURFACE OR SUBSEA DAMAGE, INCLUDING TRESPASS, AND DAMAGE TO DOWN-HOLE EQUIPMENT; (IV) COST TO KILL OR CONTROL A WILD-WELL, UNDERGROUND OR ABOVE THE SURFACE, INCLUDING ANY SIDETRACKING, FISHING, REDRILLING OR REWORKING AND RELATED CLEAN-UP COSTS; (V) DAMAGE TO PROPERTY OWNED BY, IN THE POSSESSION OF, OR LEASED BY CUSTOMER GROUP OR THE WELL OWNER, IF DIFFERENT FROM CUSTOMER (THE TERM "WELL OWNER" SHALL INCLUDE WORKING AND ROYALTY INTEREST OWNERS AND THE OWNER OF ANY LAND AND OIL/GAS PRODUCTION FACILITIES OR PIPELINES, DRILLING RIG/VESSEL, PLATFORM OR OTHER STRUCTURE AT OR WITHIN 500 METERS OF THE WELL SITE) AND THIRD PARTIES; (VI) LOSS OR DAMAGE RESULTING FROM FAILURE OF CUSTOMER GROUP'S PRESSURE CONTROL EQUIPMENT AND/OR DEVIATION FROM SCHLUMBERGER'S PRESSURE CONTROL STANDARD AT CUSTOMER'S REQUEST; OR (VII) LOSS OF OR DAMAGE TO SCHLUMBERGER GROUP'S PROPERTY OR PRODUCTS, INCLUDING BUT NOT LIMITED TO, RECOVERY, REPAIR AND REPLACEMENT EXPENSES, WHEN SUCH LOSS OR DAMAGE OCCURS: (A) IN THE HOLE OR BELOW THE ROTARY TABLE, (B) WHILE IN TRANSIT OR BEING MOVED ON ANY FORM OF TRANSPORTATION OWNED OR FURNISHED BY CUSTOMER, (C) WHILE LOCATED AT THE WELL SITE WHEN SCHLUMBERGER PERSONNEL ARE NOT PRESENT, (D) AS A RESULT OF IMPROPERLY MAINTAINED PRIVATE ACCESS ROADS TO THE WELL SITE OR AS A RESULT OF THE INFERIOR CONDITION OF LEASE ROADS OR THE SITE, OR (E) WHILE BEING USED BY OR WHILE UNDER THE CUSTODY OR CONTROL OF ANY PERSON OTHER THAN A SCHLUMBERGER EMPLOYEE, WHETHER IN AN EMERGENCY OR OTHERWISE. WITH RESPECT TO (A) ABOVE, THE PROPERTY AND PRODUCTS WILL BE VALUED AT THEIR RESPECTIVE NEW LANDED REPLACEMENT COST OR, IF REPAIRABLE, AT REPAIR COST PLUS HANDLING AND TRANSPORTATION TO SCHLUMBERGER'S DESIGNATED LOCATION. RENTAL CHARGES ON THE EQUIPMENT LOST OR DAMAGED IN THE HOLE SHALL CONTINUE TO BE PAID UP TO AND INCLUDING THE DATE ON WHICH SCHLUMBERGER RECEIVES NOTICE IN WRITING OF THE LOSS OR DAMAGE.**

- c. **APPLICATION OF INDEMNITIES. THE ASSUMPTION OF LIABILITY AND INDEMNITIES IN SECTIONS 9.a AND 9.b ABOVE SHALL APPLY TO ANY INJURY, ILLNESS, DEATH OR CLAIM ARISING OUT OF OR IN CONNECTION WITH THE CONTRACT AND/OR THE WORK PROVIDED HEREUNDER, WITHOUT REGARD TO THE CAUSE(S) THEREOF INCLUDING, WITHOUT LIMITATION, UNSEAWORTHINESS, STRICT LIABILITY, ULTRAHAZARDOUS ACTIVITY, BREACH OF EXPRESS OR IMPLIED WARRANTY, IMPERFECTION OF MATERIAL, DEFECT OR FAILURE OF EQUIPMENT, DEFECT OR "RUIN" OR OTHER CONDITION OF PREMISES, INCLUDING ANY CONDITIONS THAT PRE-EXIST THESE GENERAL TERMS AND CONDITIONS OR THE CONTRACT, OR THE SOLE, JOINT, ACTIVE, PASSIVE, GROSS OR CONCURRENT NEGLIGENCE, STRICT LIABILITY, BREACH OF CONTRACT OR DUTY, OR OTHER FAULT OF ANY MEMBER OF EITHER PARTY'S GROUP.**

- d. **Anti-Indemnity and Insurance Savings Clause. If any defense, indemnity or insurance provision contained in the Contract conflicts with, is prohibited by or violates public policy under any law determined to be applicable to a particular situation arising from or involving any Work hereunder, it is understood and agreed that the conflicting, prohibited, or violating provision shall be deemed automatically amended in that situation to the extent, but only to the extent, necessary to be in compliance with such applicable law.**

10. INCIDENTAL OR CONSEQUENTIAL DAMAGES.

- IT IS EXPRESSLY AGREED THAT THE SCHLUMBERGER GROUP SHALL NOT BE LIABLE TO THE CUSTOMER GROUP FOR ANY PUNITIVE, INCIDENTAL, CONSEQUENTIAL, INDIRECT OR SPECIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, ANY LOSS OF PROFITS, BUSINESS INTERRUPTION OR LOSS OF USE, LOSS OR DEFERRAL OF PRODUCTION, LOSS OF RIG TIME, LOSS OF DATA OR SAMPLES, OR LOSS RESULTING FROM DELAY, WHETHER**

DIRECT OR INDIRECT, SUFFERED BY CUSTOMER GROUP, REGARDLESS OF THE SOLE, JOINT, ACTIVE, PASSIVE, GROSS OR CONCURRENT NEGLIGENCE, STRICT LIABILITY, BREACH OF CONTRACT OR DUTY, OR OTHER FAULT OF ANY MEMBER OF SCHLUMBERGER GROUP. CUSTOMER SHALL WAIVE, RELEASE, PROTECT, DEFEND, INDEMNIFY AND HOLD HARMLESS SCHLUMBERGER GROUP FROM AND AGAINST ANY AND ALL CLAIMS IN VIOLATION OF THIS SECTION 10.

11. **INSURANCE.** Each party, as indemnitor, agrees to support the indemnity obligations it assumes under these General Terms and Conditions, by obtaining at its own cost, adequate insurance for the benefit of the other party and its Group as indemnitees, with contractual indemnity endorsements. To the extent each party assumes liability hereunder, such insurance shall waive subrogation against the indemnified Group and its insurers and name the indemnified Group as additional insured(s) and loss payee, but only to the extent of liabilities assumed herein by the indemnifying party, and to the same extent such coverage shall be primary to that carried by the indemnified Group. Customer shall not self-insure without the written consent of Schlumberger. Notwithstanding the above, to the extent, and only to the extent, that the Texas Oilfield Anti-Indemnity Act (TOAIA) applies to these General Terms and Conditions, the Contract or the Work, and would render void, unenforceable, or void any obligations hereunder, including those set forth in Section 9 above, each party agrees to carry supporting insurance in equal amounts of the types and in the minimum amounts required by the TOAIA. Where a party's insurance is deficient or unavailable for any reason, then such party agrees and shall be deemed to have approved self-funded or self-insurance. It is the intention of the parties hereto that the party to whom indemnity is owed hereunder will receive the benefit of such indemnity regardless of events that may happen, which could affect the insurance required to be obtained by the indemnifying party, after the Contract is entered into by Schlumberger and Customer.
12. **LIMITATION OF LIABILITY.** Notwithstanding anything to the contrary herein, except as provided under section 9.a.1 above, Schlumberger's liability arising from or in connection with the Contract (whether for indemnity, breach of contract or duty, negligence (whether sole, joint, active, passive, gross or concurrent), strict liability or otherwise) shall not in any circumstances exceed the full value of the consideration owed to Schlumberger under the Contract.
13. **EMPLOYEE SOLICITATION.** Except with the prior written consent of Schlumberger, Customer shall not directly, indirectly or through third parties solicit, recruit or induce any Schlumberger employee, consultant or representative to leave, terminate or otherwise end his/her association with Schlumberger in order to become an employee, consultant or representative of Customer Group until at least one (1) year has elapsed from Customer's receipt of the final invoice for the Work.
14. **INTELLECTUAL PROPERTY.** Schlumberger owns all rights to the proprietary intellectual property embodied in its Work or which are created in the course of providing such Work to Customer. Schlumberger does not transfer any ownership rights in such intellectual property to Customer and Customer shall not reverse engineer or cause any Schlumberger property or Products to be reverse engineered without Schlumberger's express written consent. Schlumberger will be liable for intellectual property infringement claims arising out of Customer's normal use of Schlumberger's Work but will not be liable for infringement that arises: (i) out of Customer's use of Schlumberger Work in combination with work, products or services not provided by Schlumberger; (ii) where Schlumberger Work has been specially modified, designed and/or manufactured to meet Customer's specifications; (iii) out of unauthorized additions or modifications to Schlumberger Work; or (iv) where Customer's use of Schlumberger Work does not correspond to Schlumberger published standards or specifications. Any Claim for intellectual property infringement shall be brought to Schlumberger in writing within ten (10) calendar days of service on Customer or this indemnity shall be void.
15. **MISCELLANEOUS.**
- a. **Orders:** Schlumberger reserves the right to accept or reject any Order issued by Customer or any request for Work under a previously agreed Order.
 - b. **Force Majeure:** Schlumberger shall not be liable for any delay or non-performance due to governmental regulation, labor disputes, hostile action, weather, fire, acts of God or any other causes beyond the reasonable control of Schlumberger.
 - c. **Governing Law:** If Work is furnished offshore or on navigable waters, General Maritime laws shall govern the Contract; in those instances where the General Maritime Law does not apply, the laws of the State of Texas shall apply and govern the validity, interpretation, and performance of the Contract.
 - d. **Severability:** Should any clause, sentence, or part of these General Terms and Conditions be held invalid, such holding shall not invalidate the remainder, and the General Terms and Conditions shall be interpreted as if the invalid clause, sentence, or part has been modified or omitted, if necessary, as required to conform to the jurisdiction purporting to limit such provision.
 - e. **Compliance with laws:** Customer and Schlumberger respectively agree to comply with all laws, statutes, codes, rules, and regulations, which are now or may become applicable to operations covered by these General Terms and Conditions or arising out of the performance of the Work.
16. **GENERAL COMMERCIAL CONDITIONS.** Commercial conditions, prices and technical specifications for the Work shall be documented in an Order. Unless otherwise set forth in the relevant Order or otherwise agreed to in writing by Schlumberger, the following commercial conditions shall apply:

- a. **Product Sales Are Final:** Orders placed by Customer and accepted by Schlumberger can only be canceled with Schlumberger's written consent.
 - b. **Return of Rentals:** Rentals must meet the specifications set forth in the Order for return at the end of the rental period, and Schlumberger may verify compliance at the time of return to Schlumberger's designated facility. If Rentals do not meet the specifications at the time of return, they shall, at Schlumberger's sole discretion, be sold to Customer AS-IS, WHERE IS AND WITHOUT WARRANTY, at then-current rates for sale of the same, and will be returned to Customer at Customer's cost. Any waste found in Rentals upon return to Schlumberger will be returned to Customer or disposed of at Customer's cost.
 - c. **Buy-Back of Fluids:** Where buy-back of Fluids is agreed, buy-back is conditioned on Fluids meeting the minimum specifications upon return to Schlumberger's designated facility. Buy-back is also subject to space availability at Schlumberger's designated facility. Fluids not meeting the minimum specifications will be returned to Customer at Customer's cost.
 - d. **Pricing Changes:** Schlumberger has the right to revise pricing applicable to the Work at any time, including without limitation (i) whenever Schlumberger determines that market conditions support such revision; and (ii) whenever Schlumberger determines it has been impacted by an increase in the cost of providing products and/or services, including commodities, trucking, labor, materials and/or ancillary products, materials or services related thereto (as well as associated taxes and tariffs), regardless of variation from any pre-job quotes, orders, estimates or the like that may have been submitted by Schlumberger. Such revisions may be adjusted post-job in accordance with the actual cost.
 - e. **Pricing Exclusions:** Quoted prices do not include any of the following items, which may be charged as determined by Schlumberger for a given scope of work, and shall not be considered an exhaustive list: (i) mobilization and demobilization fees; (ii) stand-by (or crew and equipment) fees and demurrage (incurred by Schlumberger Group), which shall apply in any and all circumstances other than when due to the sole fault of Schlumberger; (iii) third party reimbursable fee of 20% (or as may otherwise be specified in Schlumberger's applicable price list); (iv) fuel surcharges (as may be specified in Schlumberger's applicable price list and subject to further adjustment based on the US Energy Information Administration (EIA) for US Retail On-Highway Diesel) and transportation/mileage fees; and (v) cancellation fees, return/restocking fees and buy-back fees.
 - f. **Additional Work:** Backup tools, additional services/products and new technology items that are not specifically included in the work scope described in the Order shall be quoted upon request.
17. **EXPORT COMPLIANCE.** Customer is advised that Work provided under the Contract is subject to the U.S. Export Administration Regulations, and diversion contrary to U.S. laws and regulations is prohibited. Customer agrees not to directly or indirectly export, import, or transmit the Work to any country or end user, or for any end use, that is prohibited by any applicable U.S. law or regulation (including without limitation, to those countries, from time to time, subject to embargo by the U.S. government). Additionally, Customer agrees not to directly or indirectly export, import, transmit, or use the Work contrary to the laws or regulations of any other governmental entity that has jurisdiction over such export, import, transmission, or use. Customer represents and warrants that neither the United States Bureau of Industry and Security nor any other governmental agency has suspended, revoked, or denied Customer's export privileges. Customer agrees not to use or transfer the Work for any use relating to nuclear, chemical, or biological weapons, or missile technology, unless authorized by the U.S. government by regulation or specific written license.
18. **PUBLICITY.** Unless required by applicable laws, rules or regulations, neither party shall, or otherwise permit or cause any member of its Group to, issue or publish any press releases or make any public statements or publicize any information with respect to (i) the contents of these General Terms and Conditions, (ii) the Work contemplated to be performed under the Contract, and/or (iii) any transactions or occurrences arising as a result of the Work, without the prior written approval of the other party. Furthermore, the parties agree to confer with each other prior to any publication of any such information and to set forth such agreement in a separate writing.
19. **CONFIDENTIALITY.** Customer agrees to hold in strict confidence all information provided by Schlumberger Group to Customer, all of which is Schlumberger confidential information. Customer will not disclose such confidential information to any third party without written authorization from Schlumberger, or except as required by law or legal process.
20. **SCHLUMBERGER ENTITIES.** In the event that the parties enter into an Order subject to these General Terms and Conditions, Customer and Schlumberger agree, and it is the intent of these General Terms and Conditions, that the parties identified herein as Schlumberger shall not be jointly liable and shall only be severally liable to the extent of their respective obligations and liabilities hereunder. The specific party identified as Schlumberger in the applicable Order shall be the party responsible for the applicable Work. Each Schlumberger entity shall not be deemed a guarantor or surety with respect to the other Schlumberger entities' obligations and liabilities. This provision shall not impair Schlumberger Group's rights under Customer's indemnity and hold harmless obligations provided herein.

Michael J. Devir

From: Carlie Duhon <CDuhon3@slb.com>
Sent: Thursday, December 3, 2020 4:57 PM
To: Michael J. Devir
Subject: RE: [Ext] RE: Schlumberger ESP Data Sheet

Michael,

This actually came back to me from Sensia within 5 minutes.

The cost on a VSD and controller is below:

| PN | Description | Price |
|------------|---|--------------|
| 103156734 | SPEEDSTAR 2000+ VSD:S7+,260KVA,N3R,6P,NO INSTRUCT | \$ 21,750.00 |
| 1016835363 | Instruct Controller and I/O Card Kit | \$ 3,513.72 |

Please let me know if you need anything else.

Thanks,
Carlie

Carlie Duhon Bumgardner

Mobile +1 318-426-5504
Email cduhon3@slb.com

Schlumberger-Private

From: Carlie Duhon
Sent: Thursday, December 3, 2020 3:45 PM
To: Michael J. Devir <mdevir@keramida.com>
Subject: RE: [Ext] RE: Schlumberger ESP Data Sheet

Hi Michael,
No. This only includes the skid. It does not include a controller or VSD.
That's something I can quote to you, but it may take a few days, as that goes through Sensia.
Please let me know.
Thanks and Regards,
Carlie

Carlie Duhon Bumgardner

Mobile +1 318-426-5504
Email cduhon3@slb.com

Schlumberger-Private

From: Michael J. Devir <mdevir@keramida.com>
Sent: Thursday, December 3, 2020 3:12 PM
To: Carlie Duhon <CDuhon3@slb.com>
Subject: RE: [Ext] RE: Schlumberger ESP Data Sheet

December 10, 2020



INNOVEX

Production Solutions

Keramida

Well TBD

Vigo, IN

ESP

CO2 Sequestration Project

Innovex Proposal # 12102020sw1

Sam Wildman

(405) 658-8808

Sam.Wildman@Innovex-inc.com



Production Solutions

| | |
|-----------|----------------|
| District: | Cashion, OK |
| Contact: | Cody Steffes |
| Phone #: | (405) 519-4177 |

| | |
|------------------------|--------------------|
| Total All Pages | \$30,364.62 |
|------------------------|--------------------|

December 10, 2020



INNOVEX

Production Solutions

Keramida

Well TBD

Vigo, IN

ESP

CO2 Sequestration Project

Innovex Proposal # 12102020sw2

Sam Wildman

(405) 658-8808

Sam.Wildman@Innovex-inc.com



Production Solutions

| | |
|-----------|----------------|
| District: | Cashion, OK |
| Contact: | Cody Steffes |
| Phone #: | (405) 519-4177 |

| | |
|------------------------|-------------|
| Total This Page | \$24,864.62 |
| Total All Pages | \$24,864.62 |



INNOVEX

TERMS and CONDITIONS OF SALE

1. **Title and Risk of Loss.** Title and risk of loss pass to Buyer Ex Works Seller's fabrication plant.

2. **Prices.** Prices quoted for equipment are based on receiving orders for the quantity specified. Prices quoted also assume Seller shall not be responsible for any duties, fees, licenses, permits, tariffs, or taxes.

3. **Validity.** Prices expire 30 days from quotation date, if not previously canceled in writing by Seller. Stock materials included in a quotation are subject to prior sale.

4. **Changes.** If Buyer requests or causes a change in Seller's quoted schedule or method of engineering, fabrication, or shipment that results in delay or additional expense to Seller, all costs incurred shall be for the account of Buyer, including storage charges in the event of a suspension of fabrication or delivery. The delivery date shall be equitably adjusted when affected by any Buyer change. In no event will a change be implemented without a signed change order issued by Buyer.

5. **Shipment/Delivery.** All prefabricated packages shall be assembled in Seller's plant to the extent practicable. These assembled units shall be disassembled before shipping, but only to the extent required to facilitate the chosen means of transportation. All field reassembly necessary to place units in operable condition shall be done by and at Buyer's expense.

6. **Force Majeure.** Seller shall not be liable for delays due to unforeseeable causes or events beyond its reasonable control. Seller shall give Buyer written notice within 7 days of commencement of the cause or event and shall promptly resume performance upon expiration of the cause or event.

7. **Equipment Warranty.** Seller warrants new equipment of its manufacture to be free from defective workmanship and material for a period of 12 months from date of equipment startup or 18 months from date of Seller's transmittal of notice of readiness for shipment to Buyer, whichever period expires first, provided Buyer subjects the equipment only to the operating conditions specified by Buyer when the order is placed and in accordance with Seller's written operating instructions, if any. Seller does not warrant components manufactured by others but will use its best efforts to procure and assign any component manufacturer's warranty or guarantee to Buyer. In the event of a breach of this warranty, Seller shall, at its option, repair the defective part or furnish a replacement part Ex Works Seller's fabrication plant. Equipment performance guarantees, if any, are specifically limited to those described in Seller's quotation. **SELLER MAKES NO WARRANTY WITH RESPECT TO PARTS REQUIRING REPLACEMENT DUE TO NORMAL WEAR AND TEAR. EXCEPT FOR THE WARRANTY EXPRESSLY STATED ABOVE, THERE ARE NO OTHER WARRANTIES AND NONE SHALL BE IMPLIED BY LAW INCLUDING THOSE OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

8. **Service Warranty.** Service work is warranted for 180 days from the original service date. **NO OTHER WARRANTIES, EXPRESS OR IMPLIED, ARE GIVEN.**

9. **Indemnity.** To the extent of its negligence or fault, each party agrees to release, indemnify, and hold harmless the other party from and against all causes of action, claims, damages, demands, liability, losses, and suits of every type and character, including all litigation expenses, court costs, and attorney's fees, arising out of or related in any way to the work contemplated by this sale ("Claims") that are asserted for personal injury, death, or property damage. Seller's liability for damages to Buyer's tangible property shall be limited to repair or replacement of the damaged part or parts of the goods furnished hereunder. In no event shall Seller be liable to Buyer for delays, curtailment of plant operations, process failure, pollution, loss of profits, costs for removing any parts or equipment to be repaired or replaced, transportation, or installation charges in connection with the repair, replacement, or servicing of any parts or equipment. Any drawings or general information furnished to aid Buyer in the installation or erection of goods sold are furnished for Buyer's convenience only, are not warranted by Seller, and Seller shall incur no liability whatsoever arising therefrom.

Neither party shall be liable for any special, indirect, speculative or consequential damages of any type or character (including, but not limited to, loss of profit, use, or production) arising from or related in any way to performance hereunder.

BUYER WILL RELEASE, INDEMNIFY, AND WILL HOLD SELLER HARMLESS FROM ANY CLAIMS REGARDING POLLUTION REGARDLESS OF SOURCE.

Seller shall not be liable for the structural design or operating performance of equipment manufactured according to designs, drawings, or specifications of Buyer or a third party acting for Buyer; this provision shall also include shop drawings made by Seller and approved by Buyer.

10. **Cancellation for Convenience.** Where cancellation of this sale or any work ordered in connection with this sale is for Buyer's sole convenience, Buyer shall ratably reimburse Seller for all work performed prior to Seller's receipt of Buyer's cancellation notice and all reasonable costs incurred in effecting cancellation.

11. **Limitation of Liability.** To the fullest extent permitted by applicable law and to the extent not specifically negotiated and noted elsewhere, Seller's total liability, in the aggregate, to Buyer or anyone or any entity claiming by, through, or under Buyer for any Claims from any cause or causes including, but not limited to, any breach of contract or warranty or negligence or strict liability shall not exceed 25% of the value of the goods provided, services rendered, or work performed by Seller.

12. **Intellectual Property.** Unless otherwise specifically stipulated elsewhere, Seller shall pay all royalties and license fees and assume all costs and expenses incident to the use of any invention, composition, process, device, article, appliance, or design that is the subject of patent rights, copyrights, or other legal rights of ownership as are applicable to the goods manufactured by Seller and furnished hereunder. Seller shall indemnify and hold harmless Buyer from and against all Claims, including attorney's fees, arising out of any infringement of these rights during or after completion of performance and shall defend all Claims in connection with any alleged infringement of these rights. Seller must be notified promptly in writing and given authority, information, and assistance (at Seller's expense) for the defense, and Seller shall pay all sums and costs awarded against Buyer, not to exceed the price paid or due to Seller for the equipment held to infringe. Seller shall have no liability for infringement Claims related to its equipment, if the equipment is used for purposes other than those contemplated by the Seller or if infringement Claims arise out of the use of Seller's equipment in conjunction with other equipment not supplied by Seller. Unless the use of an infringing item or part is enjoined, Seller shall, at its own expense and option, either (i) procure for Buyer the right to continue using the item or part, (ii) replace with non-infringing items, (iii) modify it so that it becomes non-infringing, or (iv) remove the items and refund the purchase price thereof. These provisions shall not apply to any item manufactured pursuant to Buyer's design or to infringement Claims for equipment furnished but not manufactured by Seller. Further, Seller assumes no liability and shall be indemnified by Buyer for any infringement associated with any item manufactured pursuant to Buyer's design.

13. **Buyer's Financial Condition.** Seller reserves the right to cancel work at any time prior to delivery of the equipment without further obligation or liability on Seller's part, if Buyer's credit or financial condition is unsatisfactory to Seller.

14. **Payment Terms.** Terms are net 30 days from date of invoice. Interest will be charged on past due accounts at the maximum lawful rate. All fees, costs, and expenses incurred (legal or otherwise) by Seller in pursuit of monies due shall be reimbursed by Buyer. Regardless of the actual shipment date, Seller shall issue an invoice at time of notification of readiness for shipment.

15. **Inspection.** Any inspection or acceptance required by Buyer shall take place at Seller's fabrication plant; however, it is expressly understood that inspection and acceptance at the fabrication plant shall not relieve Seller of the Warranty responsibilities found in these terms and conditions. Buyer shall be responsible and pay for all permit and licenses fees required by any law, order, rule, or regulation of any authority having jurisdiction relative to inspection of the material or labor sold hereunder.

16. **Subcontractors.** Seller may subcontract all orders.

17. **Storage.** In the event Buyer delays shipment for any reason and desires to store the equipment on Seller's premises, Buyer agrees to and shall execute Seller's Storage Agreement.

18. **Assignment.** Any transaction resulting from this order shall not be assignable by either party without the prior written consent of the other party, except that any transaction may be assigned without consent to the successor of either party acquiring all or substantially all of the business or assets of that party.

19. **Controlling Terms.** These terms and conditions shall prevail over all other terms and conditions unless an officer of Seller waives the conflict in writing.

20. **Applicable Law.** The validity of these terms and conditions, all related documents, and all Claims arising hereunder shall be construed, interpreted, and governed in accordance with the laws of the State of Texas. The parties agree that for purposes of all Claims that arise out of or are related in any way to the subject matter of this sale that proper venue shall be Harris County, Texas.

21. **Buyer Responsibility.** Buyer, through its own analysis, is solely responsible for making the final product selection and assuring that all performance, endurance, maintenance, safety, and warning requirements for Buyer's particular application are met. Buyer must analyze all aspects of its particular application and follow applicable industry standards and product information. If Seller provides product options, Buyer is responsible for determining the utility and functionality of the option, as well as its suitability and sufficiency for the reasonably foreseeable uses of the product by Buyer.

22. **Survival.** Articles 7, 8, 9, 11, 12, 19, 20, and 21 shall survive termination or delivery of the goods provided, services rendered, or work performed by Seller.

Michael J. Devir

From: Sam Wildman <sam.wildman@innovex-inc.com>
Sent: Thursday, December 10, 2020 4:58 PM
To: Michael J. Devir
Cc: Jase Stender; Cody Steffes
Subject: RE: CO2 Sequestration Remediation Equipment
Attachments: KERAMIDA_CO2 Sequestration Project_Option 1-2_12102020sw1-2.pdf

Michael – Please see the two attached options that we discussed in our call earlier this week. In the first option, you will find a full wellhead option that has a 2-9/16" flange looking up for whatever tree you should choose. Option 2 is the cheaper cover plate system that we can provide. We can also provide a nipple and gate valve if need be for that. I have had engineering running down a ton of different things today, so we did not do a full stack up drawing for these two options, but can do so if need be. This equipment is specialized, and will require 8 weeks from purchase order to delivery. If you have any questions at all or would like any other information, please let me know and I will get it taken care of. We sincerely appreciate your time, attention, and your prospective business (as well as a little patience in getting this package together). Have a great day!

Best regards,

Sam Wildman

Sales Account Manager / Applications Advisor | Innovex
2709 South Ann Arbor Avenue | Oklahoma City, OK 73179
C: 405.658.8808
sam.wildman@innovex-inc.com | www.innovex-inc.com



"NO BARRIERS"

From: Michael J. Devir <mdevir@keramida.com>
Sent: Monday, December 7, 2020 11:01 AM
To: Jase Stender <jase.stender@innovex-inc.com>
Subject: RE: CO2 Sequestration Remediation Equipment

CAUTION, this is an EXTERNAL EMAIL MESSAGE.

Jase:

Attached is the pump which was quoted by SLB. Indicates 5.5-in casing and tubing of 2-7/8 in.

My goal at the ground surface is for pump discharge to connect with a buried pipe adjacent to well which will be a shallow buried pipe over a distance of 500 feet which discharges into an equalization/storage tank.

Michael J. Devir, P.E.

KERAMIDA Inc.
317/685-6600 (Office) • 317/363-5972 (Cell)

From: Jase Stender <jase.stender@innovex-inc.com>
Sent: Friday, December 4, 2020 6:28 PM
To: Michael J. Devir <mdevir@keramida.com>
Cc: Sam Wildman <sam.wildman@innovex-inc.com>; Leah Whittaker <leah.whittaker@innovex-inc.com>
Subject: Fwd: CO2 Sequestration Remediation Equipment

Michael,

Thank you for your time this evening. Please see my below contact information. Sam and I will give you a call on Monday morning via a Microsoft Teams meeting and we can run through a couple of different options for you and finalize a budgetary number. Let me know if you have any questions.

Thank you and have a great weekend.

Jase Stender
Sales Director, North America
Innovex Production Solutions
303.385.7929
jase.stender@innovex-inc.com

Begin forwarded message:

From: Leah Whittaker <leah.whittaker@innovex-inc.com>
Date: December 4, 2020 at 4:16:52 PM MST
To: Jase Stender <jase.stender@innovex-inc.com>
Subject: Fwd: CO2 Sequestration Remediation Equipment

Leah Whittaker
713-882-3553

From: Michael J. Devir <mdevir@keramida.com>
Sent: Friday, December 4, 2020 12:44:15 PM
To: Scott Loomis <scott.loomis@innovex-inc.com>
Cc: Leah Whittaker <leah.whittaker@innovex-inc.com>
Subject: FW: CO2 Sequestration Remediation Equipment

CAUTION, this is an EXTERNAL EMAIL MESSAGE.

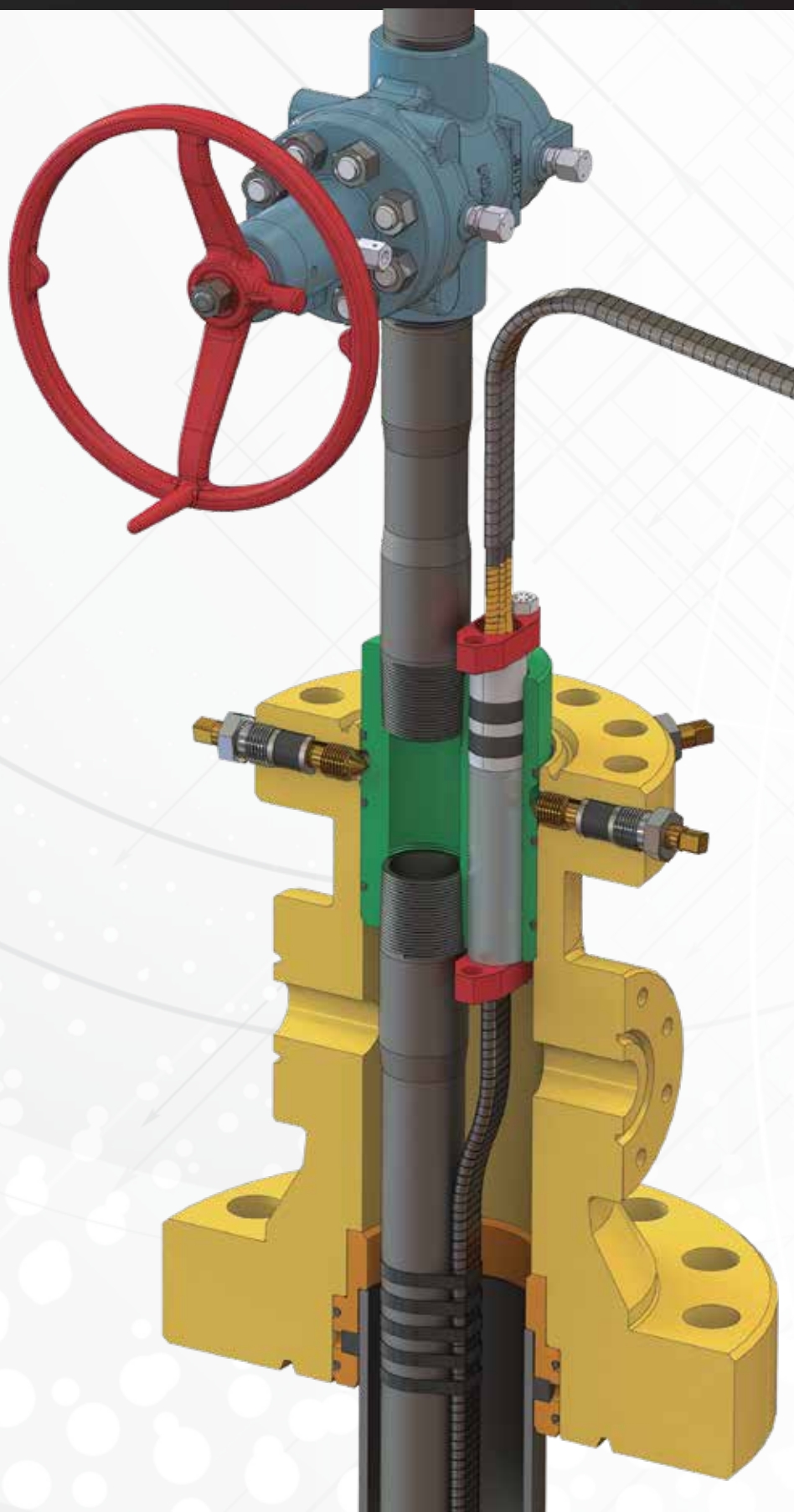
Scott:

Checking back on below and if this is something you may be able to assist with budgetary numbers?

Any rough numbers would be appreciated.

Michael J. Devir, P.E.
KERAMIDA Inc.

Super Pack



Making the Packoff Super!

Super Pack offers superior well control and safety to traditional packoffs with the ability to run and land through the BOP stack. Slip hanger space-out issues are now eliminated as the hanger lands in the same location every time ensuring easy flowline make-up.

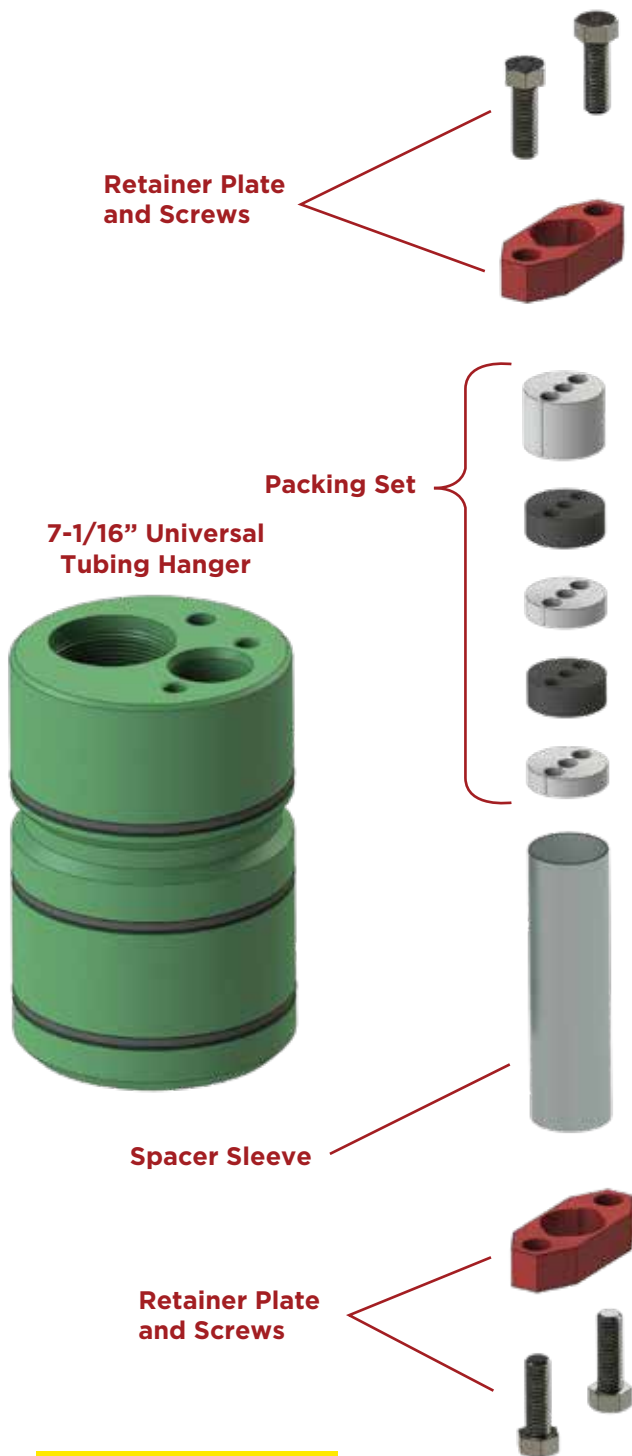
A split packing set is easily installed within a small 12" cable work area. Seals are energized using the top bolts and can be re-energized later if required.

On reruns, the ESP cable can be easily removed from the bottom of the hanger by removing the lower retainer. This alleviates the challenge of removing the pack off from a top pocket.

The 7-1/16" Tubing Hanger is designed to fit in all major brands of wellhead and can be used in 5,000 and 10,000 PSI Tubing Spools.

Hanger comes standard with a 3/8" NPT port to support capillary lines. Plugs are provided if no line is used.

Super Pack™



FEATURES/BENEFITS

- Hanger lands through the BOP for full well control
- Consistent flowline height based off hanger landing in spool. No need to measure and then set slips for correct height
- Increased safety by not having hands in between the elevators and a slip type hanger
- No damage or deterioration to the tubing string due to the slips holding string weight
- Universal tubing hanger design fits in most tubing spools
- Reliability increased by not having any conductive material surrounding the cable
- Increased safety by not having to strip the cable through the BOP during installation. During a normal packoff installation personnel are under a suspended load while pulling the cable through the BOP
- Overall lower tree height by being able to land into customer's tubing head
- Hanger ported for capillary line
- ESP Packing and cable can be easily removed from the bottom of the hanger
- Hanger has corrosion protection

SPECIFICATIONS

- The Super Pack hanger will fit all 7-1/16" 5,000 and 10,000 PSI wellhead designs
- Pressure: Rated to 1500 PSI
- Temp: 200°F (93°C) -70°F (-56°C)
- Made of NACE compliant material
- For use with all 7" and 5-1/2" 17 lbs/ft or lighter production casings
- Reference QCI S-429 for full installation procedures



Quick Connectors, Inc.
5226 Brittmoore Rd
Houston, Texas 77041
Phone: 713.984.1800
Fax: 713.984.1079

quickconnectors.com

Patent Pending
© 2017 Quick Connectors, Inc. All Rights Reserved

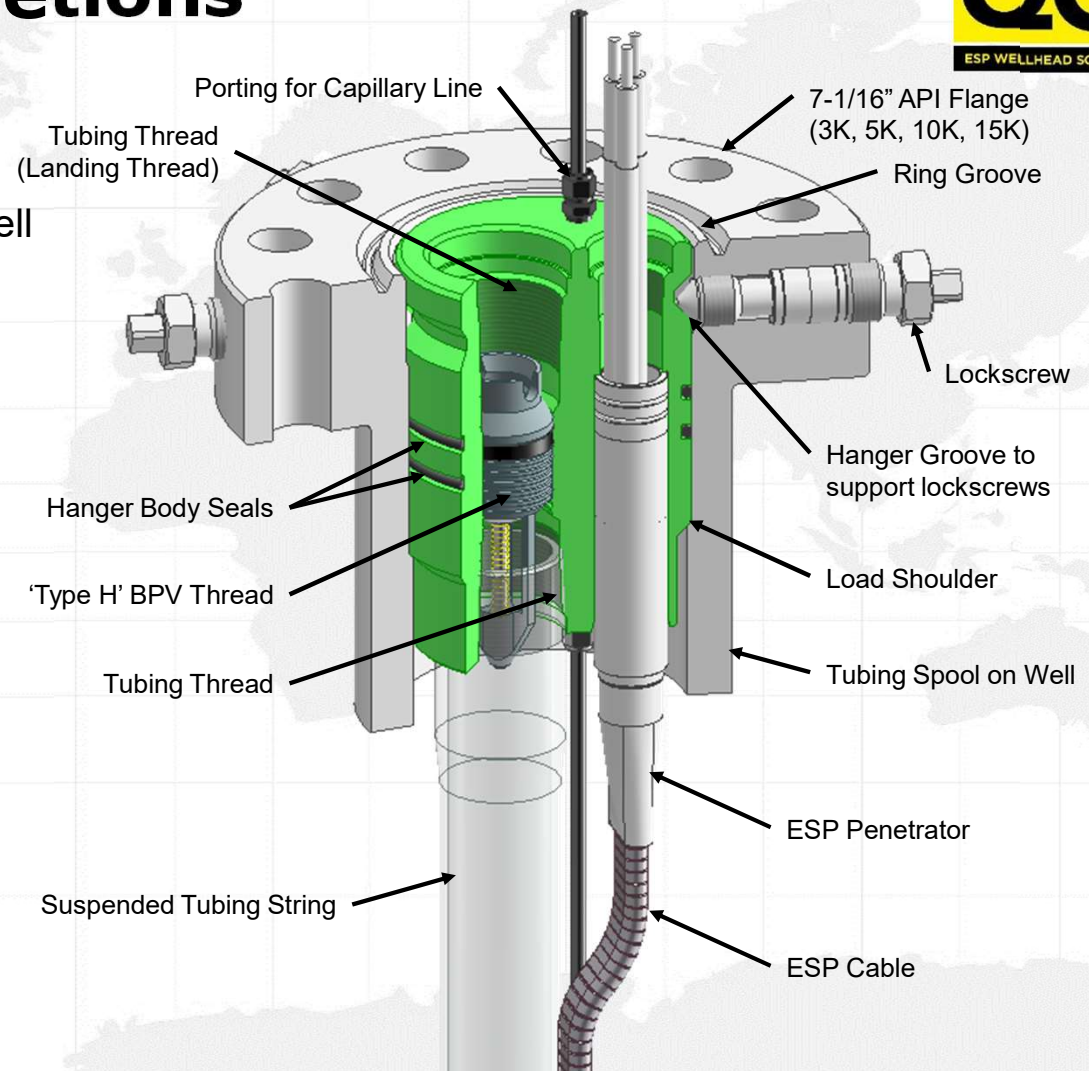
Hanger Only Completions

Features and Options:

- Lands Thru BOP
- Lands directly into the tubing spool on well
- Dual body seals on body of the hanger
- EUE Tubing Threads top and bottom
- BPV Profile Standard
- Ported for Capillary Line (Plugged if not used)
- Supports Threaded Valve Trees
- Full opening Tree nipple required to drift BPV

Availability

- 7" Hangers in stock supporting:
 - 2-3/8" EUE Tubing
 - 2-7/8" EUE Tubing
 - 3-1/2" EUE Tubing
 - 4-1/2" 8RD Casing



Hanger & Cover Plate Completions

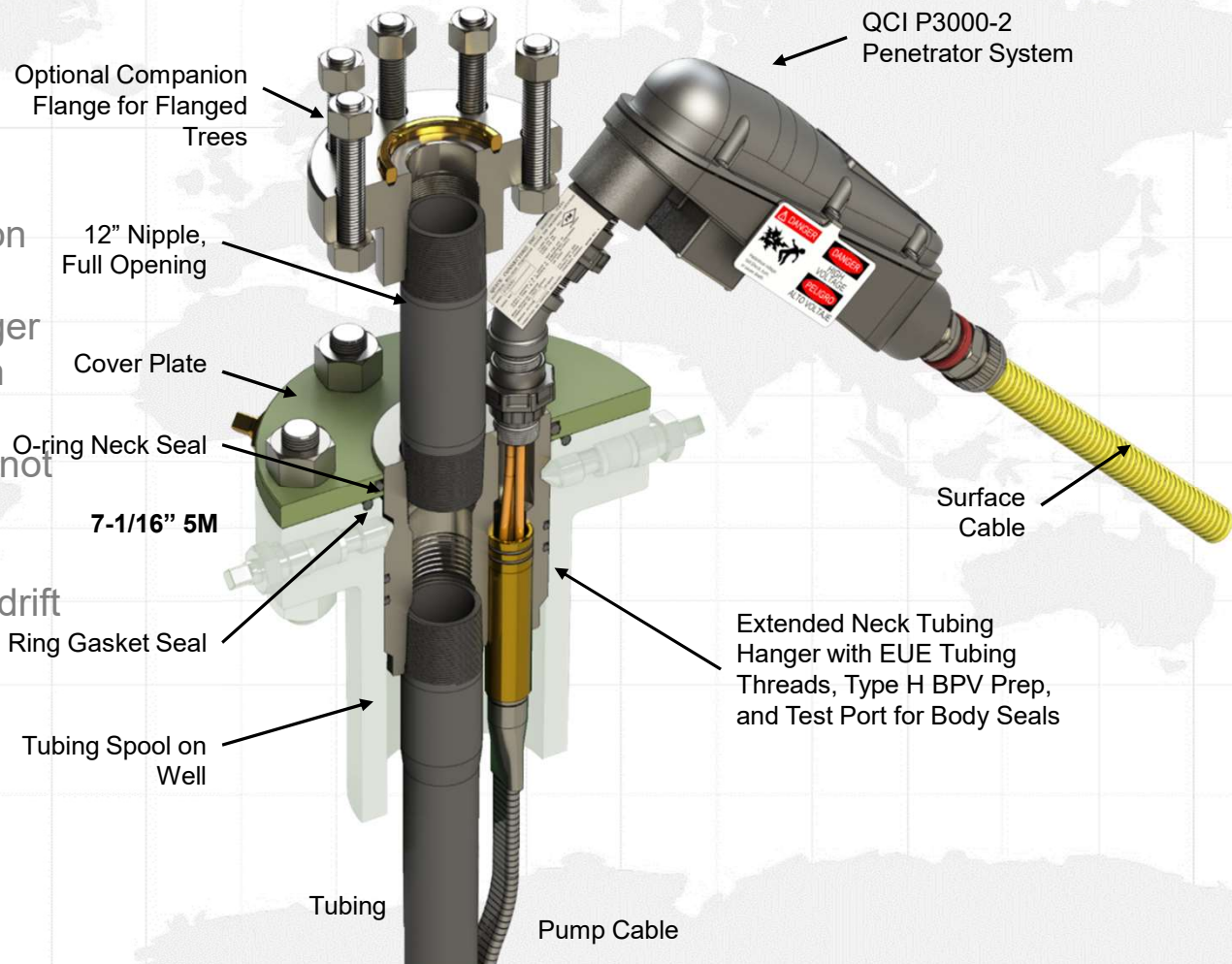


Features and Options:

- Hanger and Spool protected from Environment
- Lands Thru BOP
- Lands directly into the tubing spool on well
- Dual body seals on body of the hanger
- EUE Tubing Threads top and bottom
- BPV Profile Standard
- Ported for Capillary Line (Plugged if not used)
- Supports Threaded Valve Trees
- Full opening Tree nipple required to drift BPV

Availability

- 7" Hangers in stock supporting:
 - 2-7/8" EUE Tubing
 - 3-1/2" EUE Tubing
 - 4-1/2" 8RD Casing



Hanger & Adapter Completions – P3

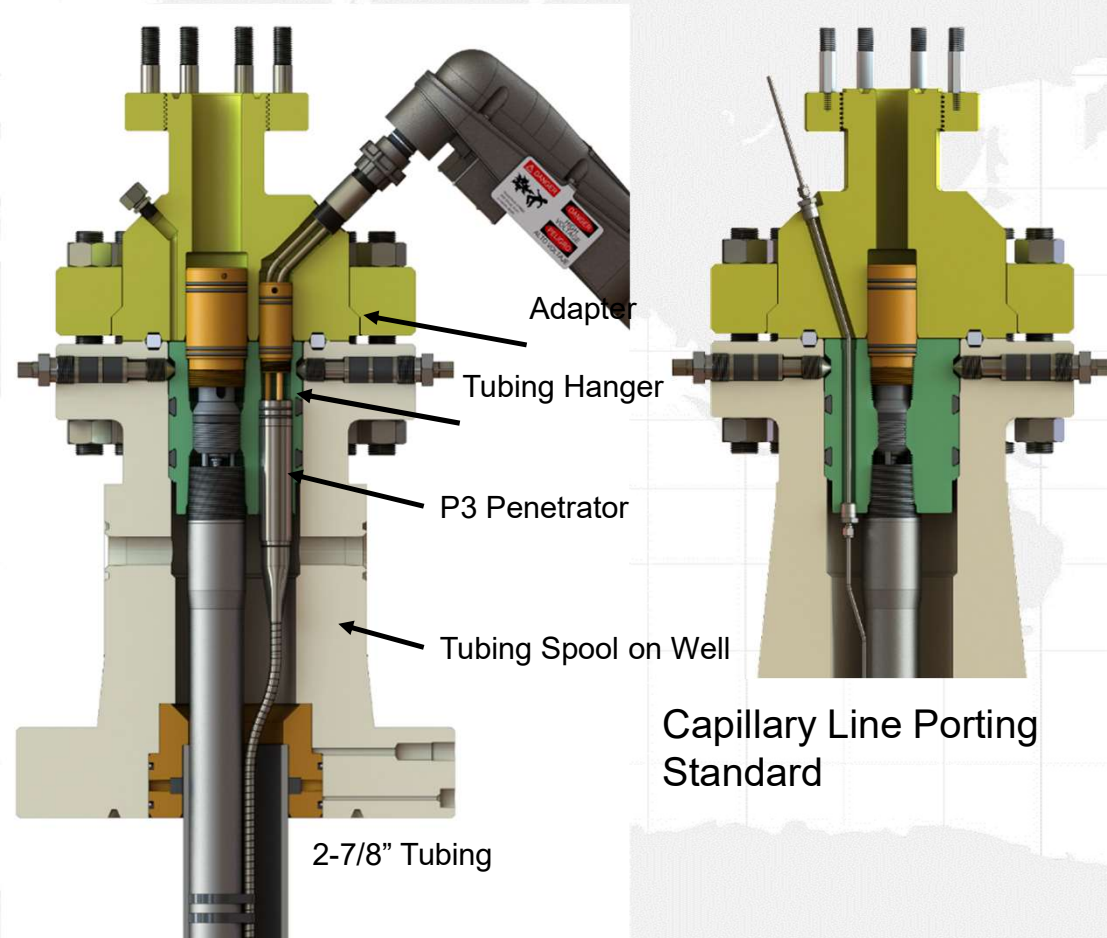


Features and Options:

- All Seals Tested at installation
- Dual Dove Tail seals on body of the hanger
- Supports Flanged Valve Trees
- Rotation Flange allow no required orientation of the hanger
- Top rotation flange provides direct alignment to the existing flow line
- Lands Thru BOP
- Lands directly into the tubing spool on well
- EUE Tubing Threads top and bottom
- BPV Profile Standard
- Ported for Capillary Line (Plugged if not used)

Availability –

- 7" 5K, 10K and 15K in stock for:
 - 2-3/8" EUE Tubing
 - 2-7/8" EUE Tubing
 - 3-1/2" EUE Tubing



Hanger & Adapter Completions – P3

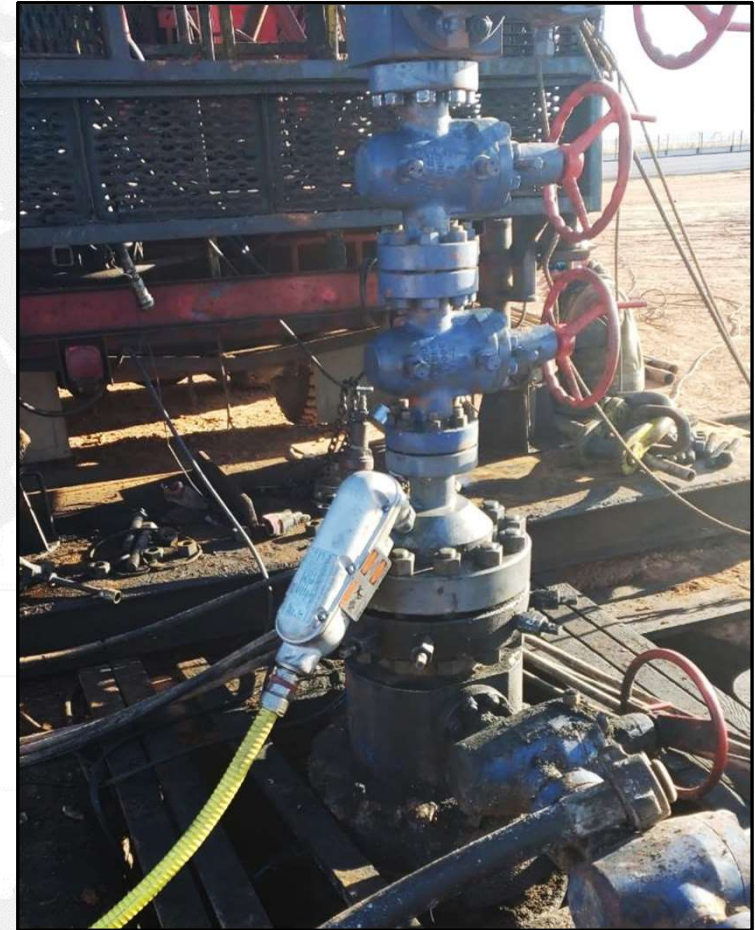


Pros

- Lands in all major brands and pressure ratings
- Fully tested on installation
- Bottom rotation flange supports hanger in any orientation
- Top Rotation Flange adjust to existing flowline saving construction costs.
- Ported for Capillary Line standard
- Dual robust Dove Tail seals on tubing hanger
- Supports flanged valve trees
- Lands direct into Tubing Spool on Well
- Hanger lands thru BOP
- Has BPV Profile
- Hanger Retained by Lockscrews
- Readily available
- API Compliant
- NEC Compliant
- Meets NACE requirements
- Offered in Class 1, Division 1 and 2 solutions

Cons

- Cost



Office: 701-652-3325 | Cell: 701-307-0123



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CLEARANCE

Used oil field tubing, pipe and sucker rod

Used oil field tubing, pipe and sucker rod

4-1/2" Tubing 10.79# per ft

- Average Length 40'
- \$65.00 Per Joint

3-1/2" Tubing 9.30# per ft

- Average length 30'

- **\$45.00** Per Joint

2- 7/8" Tubing 6.50# per ft

- Average Length is 30'
- **\$35.00** per joint

2-3/8" Tubing 4.70# per ft

- Average Length is 30'
- **\$33.00** Per Joint

Other Sizes Available Sold Per Ft

-5-1/2"

-8-5/8"

-9-5/8"

1" Sucker Rod

- Asking **\$9.50** per rod

7/8" Sucker Rod

- Asking **\$8.50** per Rod

3/4" Sucker Rod

- Asking **\$7.00** Per Rod

10' Posts & Clips Available

- **3.5" \$19.00** Per Post

- 2-7/8" \$16.00 Per Post
- 2-3/8" \$15.00 Per Post

Clips

- Clips ~~\$1.60~~ Per Clip
- Clips With holes ~~\$1.70~~ Per Clip

-Will cut to fit your needs

-Delivery available ~~\$2.60~~ per loaded mile

*Semi load price applies to any one product or mixed load equaling total weight of #48,000 pounds or more

Keywords: red band , junk tubing , well pipe , drill stem , oil well pipe , fencing , wind break panels , sucker rod , oil field pipe

Contact Us



Office: 701-652-3325 | Cell: 701-307-0123



biel.chase@gmail.com



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Store Hours

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Michael J. Devir

From: John Fralich <jfralich@barthelectric.com>
Sent: Tuesday, December 8, 2020 9:01 PM
To: Michael J. Devir
Subject: Electrical budget # for service, pumps, trailer connections and grounding

Ok-

Power to the pumps listed below as well as control wiring in a separate conduit for motor controllers. (500' distance from centrally located service)
New 800 amp service derived from utility transformer w/in 100' (Nema 1 enclosure) grounding for 800 amp service
New Nema 3R panel and transformer to feed (2) site trailers (plus grounding) (w/in 100' from new service)
Disconnect service from utility transformer and remove
Necessary permit ,equipment to install above
Work to be completed w/in 3 years

Clarifications:

Work to be completed during normal working hours- No OT or weekends/ holidays
Copper wiring for all conductors
Excavation and conduit installed by others
Usage fees paid by others

Cost \$343,000.00

Pretty realistic for the information that you provided.. Good luck

Thanks,

John

From: Michael J. Devir [mailto:mdevir@keramida.com]
Sent: Tuesday, December 8, 2020 11:17 AM
To: John Fralich <jfralich@barthelectric.com>
Subject: RE: Electric Cost

Sounds reasonable to me. As stated previously – looking for reasonable/conservative round estimated costs. Thx

Michael J. Devir, P.E.

KERAMIDA Inc.
317/685-6600 (Office) • 317/363-5972 (Cell)

From: John Fralich <jfralich@barthelectric.com>
Sent: Tuesday, December 8, 2020 11:15 AM
To: Michael J. Devir <mdevir@keramida.com>
Subject: RE: Electric Cost

800 amp is more of an industry standard size and the cost difference isn't that great..

From: Michael J. Devir [<mailto:mdevir@keramida.com>]
Sent: Tuesday, December 8, 2020 11:13 AM
To: John Fralich <jfralich@barthelectric.com>
Subject: RE: Electric Cost

John:

Below in RED

Michael J. Devir, P.E.
KERAMIDA Inc.
317/685-6600 (Office) • 317/363-5972 (Cell)

From: John Fralich <jfralich@barthelectric.com>
Sent: Tuesday, December 8, 2020 10:56 AM
To: Michael J. Devir <mdevir@keramida.com>
Subject: RE: Electric Cost

Working on this now... a few questions-

- (1) 250 HP pump – Central Area near service
- (4) 7.5 HP pumps – Remote 500 ft N/S/E/W
- (4) 45 HP pumps - Remote 500 ft N/S/E/W
- (2) 3 HP pumps – Central Area/treatment trailer

All of these 500' away from power source- underground excavation and conduit by others, correct? Planning centrally located service where the treatment equipment will be located. The 45 HP and 3 HP pumps will be 500 ft to the N/S/E/W from the central plant area. Excavation contractor will do the trenching and place the conduit and piping needed.

- (1) 800 amp 277/480v service with grounding - I had 600 AMP, but if need 800 AMP you know better. Is this increase to add in office trailer?
- (2) (1) 480/120v Nema 3R transformer to feed 120v NEMA 3R service for trailer city. (w/in 200 ' of 800 amp service)(with grounding) – Yes, office trailer will be near-by w/in 200 feet.

Missing anything? Think that is all the pieces. Provide and install the new service. Connect it to the office trailer, treatment trailer. Provide and pull wires in the underground conduits and make all connections to equipment/pump controllers.

Only other item – cost to remove installed service/equipment after end of project in an estimated 3 years?

Thanks

From: Michael J. Devir [<mailto:mdevir@keramida.com>]
Sent: Tuesday, December 8, 2020 9:34 AM
To: John Fralich <jfralich@barthelectric.com>
Subject: Re: Electric Cost

John

Checking back on the updated budget numbers? At your convenience. Thanks

Sent from my iPhone

On Dec 4, 2020, at 8:02 AM, John Fralich <jfralich@barthelectric.com> wrote:

I can probably get something to you by Monday afternoon...

From: Michael J. Devir [<mailto:mdevir@keramida.com>]

Sent: Thursday, December 3, 2020 5:37 PM

To: John Fralich <jfralich@barthelectric.com>

Subject: RE: Electric Cost

John:

Received some further information today on potential equipment for this design, and it is all much larger HP.

Presently have the following (460 VAC/3 Ph) Equipment:

Initial 90 days of operation:

- 250 HP pump (267 Amps) to run continuous (water injection pump)
 - 4x 7.5 HP pumps (4x 11 Amps) to run continuous (submersible make-up water pumps)
- Total 311 Amps

Thereafter, for a 2 year period the following:

- 4x 45 HP pumps (4x 67.1 Amps) continuous (deep ESP pump)
 - 2x 3 HP pumps (2x 4.8 Amps) continuous (treatment bldg.)
- Total 278 Amps

- misc power for office trailer, treatment trailer, heat trace (20% of above)

Since project is to run in 2 phases – probably could do a 400 AMP service, but should likely price a 600 AMP service.

Can you revise the numbers you provided me to reflect the revised equipment? Sorry for this revision.

Any questions please let me know.

Michael J. Devir, P.E.

KERAMIDA Inc.

317/685-6600 (Office) • 317/363-5972 (Cell)

From: John Fralich <jfralich@barthelectric.com>

Sent: Thursday, December 3, 2020 7:57 AM

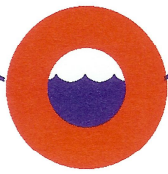
To: Michael J. Devir <mdevir@keramida.com>

Subject: RE: Electric Cost

Michael,

Your 10k per well is a good number (probably closer to 9K) with the footages that you gave to me and the excavation and conduit provided and installed by others.

The 75K number is reasonable for a 200 amp 3 phase service I n a NEMA 3R enclosure. Obviously, footage from the utility transformer or existing service that you are feeding the new 200 amp service



RTMAN

Drilling & Water Services

Research - Design - Construction - Maintenance
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Michael Devir
KERAMIDA, Inc
401 N College Ave.
Indianapolis, IN 46202
317-685-6600

RO-19003

March 12, 2019

317-363-5972 © mdevir@keramida.com

We propose the installation of a new irrigation well on the south side of Indianapolis, IN. This is for estimating purposes, but should be more than adequate to cover the costs for a well and pump system consisting of the following:

- Drill a well and install 7" PVC casing
- Install up to 10' of 6" stainless steel screen
- Furnish and install silica gravel pack around screen and at least 5' above top of screen
- Develop well to maximum capacity utilizing high pressure jet washing and air lift
- Install pitless adapter with a 2" outlet
- Install 5 hp-480 volt-3 phase submersible motor
- Install submersible pump capable of pumping 75 gpm at 35 psi at 40' pumping level
- Install 40' of 2" schedule 80 threaded PVC drop pipe for pump
- Install 12-3 PVC coated submersible pump wire

This estimate does not include any electrical control or wiring except in the well. It also does not include any piping away from the pitless adapter. We can furnish costs for these items and include that portion of the installation, but we don't have any details concerning these items. This also does not include any abandonment of the existing well or removal of the existing pumping equipment. Please contact me with any questions or comments.

The total estimated for the project as described above would be \$12,500.00. This is assuming we have good access to the site. Thank you for this opportunity to offer our services.

Respectfully,

Rick Ortman
President
Ortman Drilling & Water Services

Office Locations Throughout Indiana

www.ortmandrilling.com

If this well was to be located in the remote farm field and say 200 to 300 feet from the road where overhead power is located. Any idea what the cost may be to bring power to the well location based on past project experience?

Appreciate any thoughts.

Mike Devir , P.E.

Senior Engineer
KERAMIDA Inc.
401 North College Avenue
Indianapolis, IN 46202
t: (317) 685-6600 m: (317) 363-5972
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From: Rick Ortman [mailto:rortman@ortmandrilling.com]
Sent: Tuesday, March 12, 2019 4:50 PM
To: Michael J. Devir
Subject: RE: irrigation well

Mike

It would change very slightly, the 208 volt would require slightly larger submersible pump wire. The well should take 1-1/2 days to drill and develop. We have all wheel drive rigs, water trucks, support trucks and cranes, but we still need decent ground conditions to access the site. This will be dependent upon how much rain we get and how far off of a drive of some type the well is located. Our rigs and water trucks still weigh 50,000-60,000 pounds so they don't float very well. If you have any other questions, just call or email. Thank you.

A handwritten signature in black ink that reads "Rick Ortman".

Rick Ortman
President
Ortman Drilling and Water Services
765-438-2278



From: Michael J. Devir [mailto:mdevir@keramida.com]
Sent: Tuesday, March 12, 2019 4:28 PM



C&J Well Co

Drilling • Pump Service • Treatment

ESTIMATE

Date

3/13/2019

Prepared by: Leah Gaskin

Email Address: leah@cj4water.com

Office Number: 317-892-2100

Customer

Keramida
mdevir@keramida.com
317-685-6628 Mike

Job Location

2900 South Capitol Ave.
Indianapolis, IN

| Description | Price |
|--|--------------|
| 6" Well to provide 75 Gallons Per Minute for Irrigation: 6" well with stainless steel screen (or rock boot), pressure grout, and up to 100' of drilling Additional 6" drilling is \$30/ft. after 100' if needed *Dry holes are \$20/ft. when applicable but are not likely in this area *Optional upgrade to an 8" well if desired, is an additional \$2000 added to base price. *Additional 8" drilling is \$50/ft. if needed after 100' | \$ 6000.00 |
| 208 V, 3 Phase, 7.5 H.P. Grundfos Pump and VFD to provide 75 GPM at 70 PSI: This includes up to 80' of drop pipe and wire. *This system includes a tank at the well head that will need winterized annually or a buried tank at the well head since there is not a facility to install the equipment in *Power to the well head to be provided by others *C&J to provide pipe threads for another company to hook to, but we are not quoting connections currently *The above price is to include a well seal. If a pitless adaptor is desired, please add \$6000.00 *Marion County Well & Pump Permits are \$100 *Parts & materials subject to sales tax | \$ 29,500.00 |

Printed Name: _____ Signature: _____

Title: _____ Date: _____

Thank you for the opportunity to bid your project. Appointments to meet on-site are available upon request. Please return signed copy of estimate via email, fax **(317-892-2101)** or mail if this estimate is acceptable.

All unpaid bills carry a 1-1/2% per month interest charge after the due date. All legal and collection fees generated in order to collect past due accounts are to be paid by the customer.

Thank you for your business!

December 4, 2020

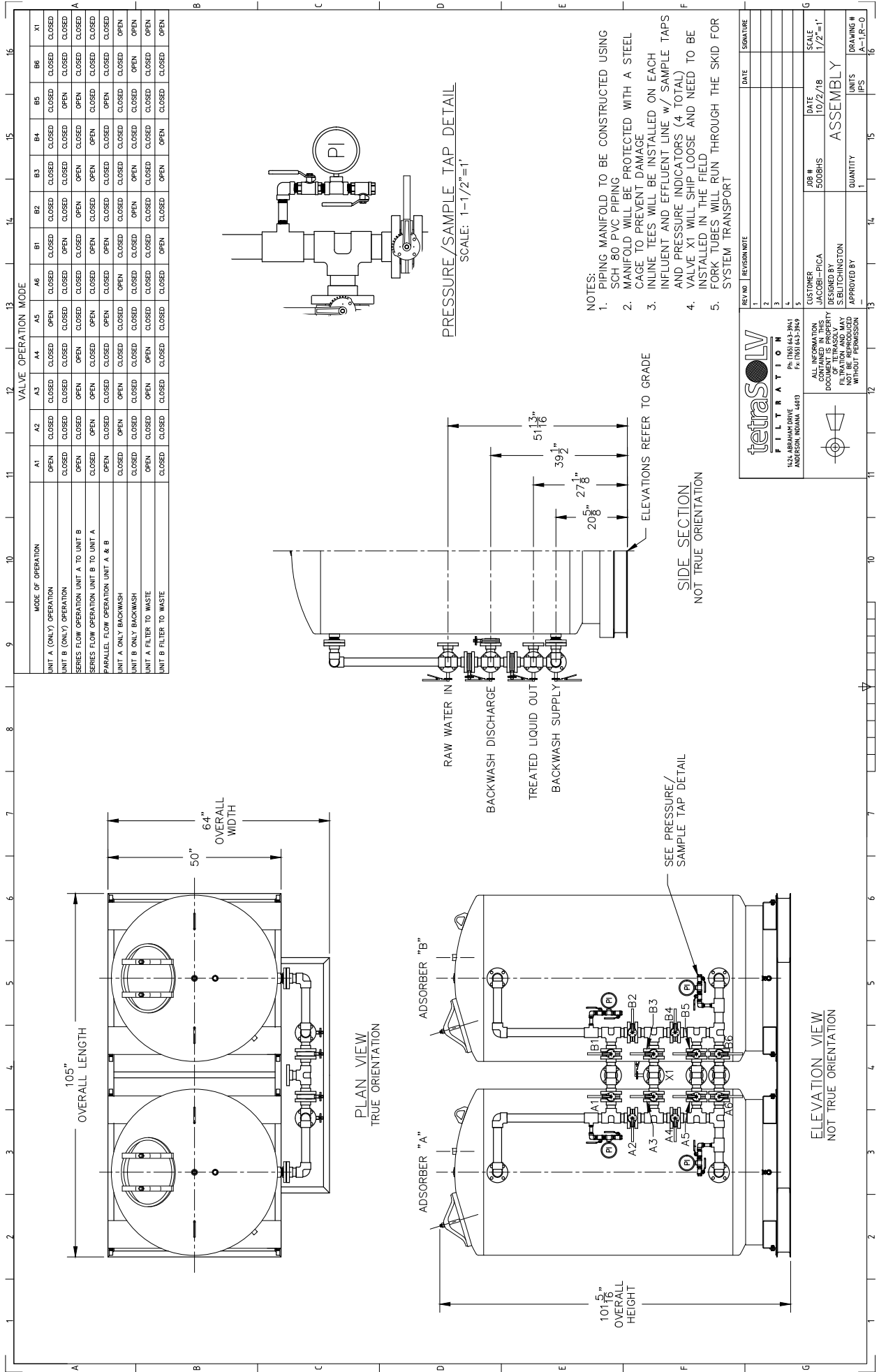
Quotation Description

Preliminary estimate of the treatment methodology and budgetary numbers for the treatment of heavy metals from ground water.

Based on the limited analytical data available. I am proposing the following. When complete analytical's and discharge goals are established. We will be able to provide a firm proposal.

The proposed system would consist of a duplex bag filter, 1000-gallon skid mounted surge tank, transfer pump, 2 HP 2000 skid mounted absorber vessels loaded with a to be determined resin media, transfer pump, skid mounted 1000-gallon surge tank, 1 transfer pump to discharge point.

| Item Description | Qty | Unit Cost | Total Cost |
|--|-----|---|---------------------|
| Inlet Equalization 1000-gal Tank, Level Switches | 1 | \$3,100.00 | \$3,100.00 |
| Media Treatment Vessels (40 gpm, 2xHPAFs, skid, manifold) | 2 | \$12,000.00 | \$24,000.00 |
| Media (Resin for Metals Removal) - Initial Fill | 2 | \$16000.00 | \$32,000.00 |
| Discharge Equalization 1000-gal Tank, Level Switches | 1 | \$3100.00 | \$3100.00 |
| Duplex Bag Filters with Manifold, Pre-Treatment | 1 | \$4100.00 | \$4100.00 |
| Control Instruments & Auto-Dialer for Alarms | 1 | \$20,000.00 | \$20,000.00 |
| Media Change Out - Turn-Key w/Disposal as Non-Haz | 6 | | |
| Transfer Pump, 3 HP, 460VAC 3 PH for Equalization Tank Skids | 2 | \$1,635.00 | \$3,270.00 |
| Installation | 1 | 2 days included labor, cranes etc. by others. Addition days are available if needed at \$1200.00 per day. | |
| Freight | 1 | \$2000.00 | \$2000.00 |
| Media Change outs | 6 | 21,800.00 | \$127,680.00 |
| TOTAL COST | | | \$219,250.00 |



Company: RD Woods
Name:
Date: 12/01/2020



Pump:

Model: HP75-100SS&BR
Type: HP75
Synch Speed: 3600 rpm
Dia: 4.75 in
Curve: 060211-1

Dimensions:
Suction: 0.75 in
Discharge: 0.75 in

Fluid:

Name: Water
SG: 1
Density: 62.4 lb/ft³
Viscosity: 1.1 cP
Temperature: 60 °F

Vapor Pressure: 0.256 psi a
Atm Pressure: 14.7 psi a
Margin Ratio: 1

Search Criteria:

Flow: 40 US gpm
Head: 40 psi

Near Miss: 20% of Head
Static Head: 0 psi

Pump Limits:

Temperature: 300 °F
Wkg Pressure: 150 psi g

Sphere Size: 0.03 in

Motor:

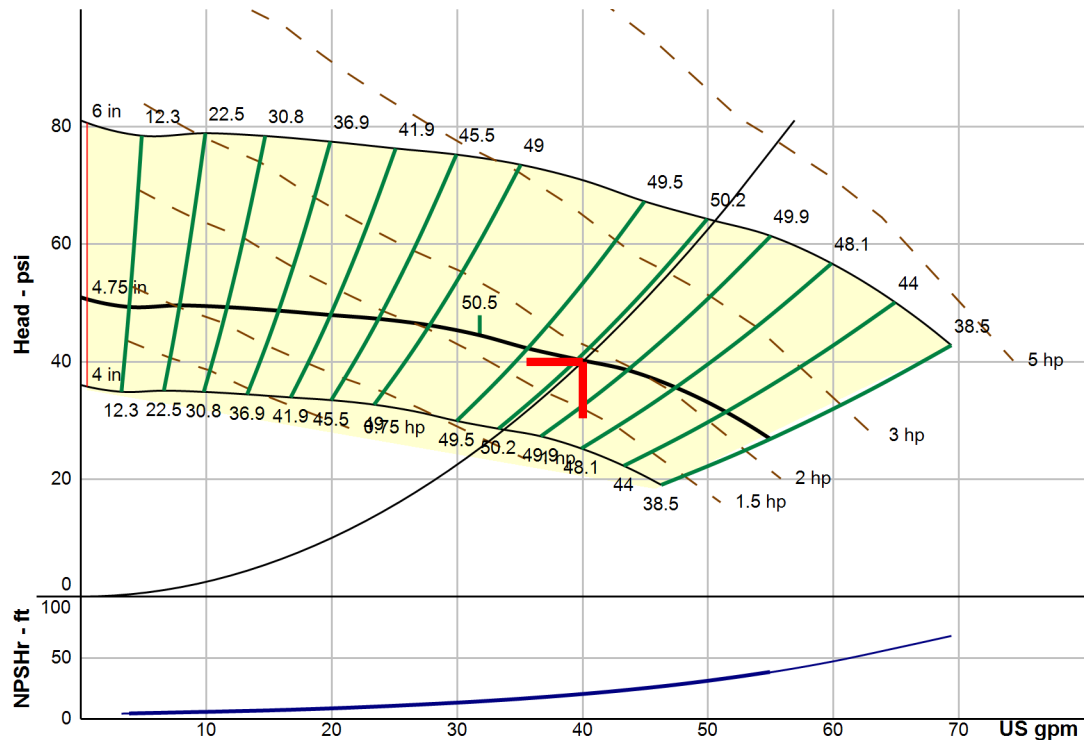
Standard: NEMA
Enclosure: TEFC
Frame: 182T
Sizing Criteria: Max Power on Design Curve

Size: 3 hp
Speed: 3600 rpm

Pump Selection Warnings:

None

| --- Duty Point --- | |
|----------------------|-----------------------|
| Flow: | 40.1 US gpm |
| Head: | 40.2 psi |
| Eff: | 50.2% |
| Power: | 1.87 hp |
| NPSHr: | 20.6 ft |
| Speed: | 3450 rpm |
| --- Design Curve --- | |
| Shutoff Head: | 51 psi |
| Shutoff dP: | 51 psi |
| Min Flow: | 0.5 US gpm |
| BEP: | 50.5% @ 31.8 US gpm |
| NOL Power: | 2.24 hp @ 54.9 US gpm |
| --- Max Curve --- | |
| Max Power: | 4.5 hp @ 69.4 US gpm |



Performance Evaluation:

| Flow | Speed | Head | Efficiency | Power | NPSHr |
|--------|-------|------|------------|-------|-------|
| US gpm | rpm | psi | % | hp | ft |
| 48 | 3450 | 35 | 47.5 | 2.06 | 28.8 |
| 40 | 3450 | 40.2 | 50.2 | 1.87 | 20.5 |
| 32 | 3450 | 44.4 | 50.4 | 1.64 | 14.6 |
| 24 | 3450 | 47.2 | 45.7 | 1.44 | 10.4 |
| 16 | 3450 | 48.7 | 37.2 | 1.22 | 7.38 |

BF Series

Single Bag Housings: #1, #2, #3 and #4 sizes



- Designed for industrial and commercial filter applications
- Heavy duty construction for maximum durability
- 1/8" perforated stainless steel basket (optional perforations and mesh sizes available)
- #1 and #2 Size Housings:
 - Available in 316L Stainless Steel, 304L Stainless Steel or Carbon Steel construction for a wide range of chemical compatibility
 - Clamp or Swing Bolt closures
 - Stainless steel compression spring provides positive bag sealing
 - Adjustable stainless steel leg assembly
 - 1/4" FNPT gauge ports and 1/2" FNPT drain port
- #3 and #4 Size Housings:
 - 316 Stainless Steel construction
 - Clamp closure for easy bag change outs
 - Optional compression spring and adjustable mounting legs

Applications

| | |
|-----------------|--------------------------|
| Water | Chemicals |
| Food & Beverage | Electronics |
| Oil | Inks / Paints / Coatings |
| Coolants | Pulp & Paper |

Specifications & Operating Parameters

Maximum Operating Pressure

150 psig (10.3 bar) @ 300°F (149°C)

Connections

Inlet /Outlet:

2" FNPT (#1 and #2 Sizes)

3/4", 1" and 1 1/2" FNPT (#3 and #4 Sizes)

Optional: RF Flanges or Sanitary Ferrules

Drain Port: 1/2" FNPT (#1 and #2 Sizes)

Gauge Ports: 1/4" FNPT - clean and dirty sides (#1 and #2 sizes)

Vent Port: 1/4" NPT Plug

Gaskets

Buna N

Optional: EPR, Silicone, Teflon Encapsulated Silicone, Viton

Baskets

1/8" perforated stainless steel

Options: various perforation and mesh sizes

Materials of Construction

Head / Shell:

#1 and #2 Sizes

316L Stainless Steel, 304L Stainless Steel, Carbon Steel

#3 and #4 Sizes

316L Stainless Steel

Eye Nuts: Zinc plated steel

Mounting Legs: 304L Stainless Steel

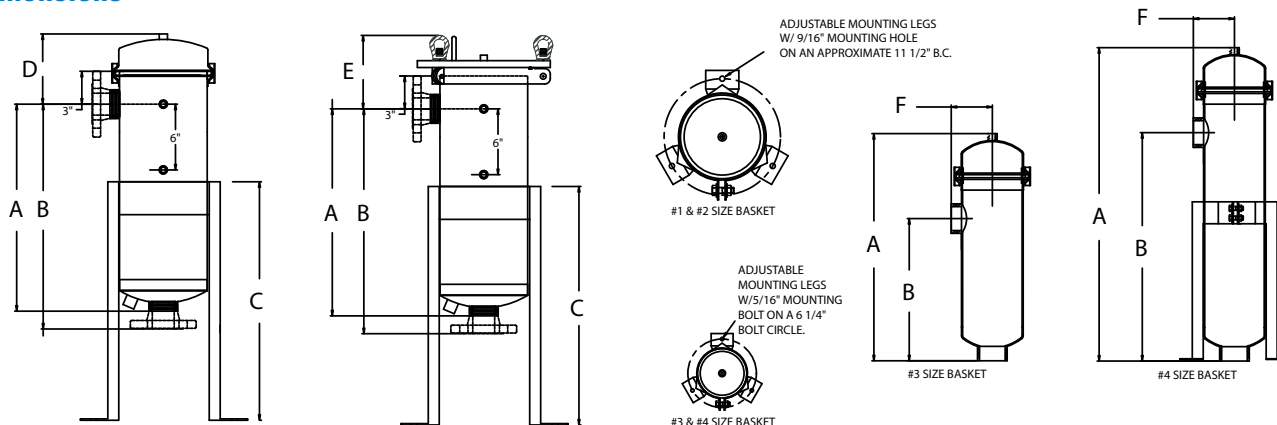
Options

- Side Inlet / Side Outlet (#1 and #2 sizes)
 - 134 epoxy coating for seawater and corrosive applications
- See ordering guide for complete selection of options*

| MODEL AND BAG SIZE | CLOSURE | MAX FLOW RATE* GPM (LPM) | DRAIN SIZE | DIMENSIONS | | | | | |
|--------------------|---------------------|--------------------------|------------|--------------------|---------------------|-------------------|-------------|--------------------|-------------|
| | | | | A | B | C | D | E | F |
| BFS-1 / BFC-1 | Clamp or Swing Bolt | 70 (265) | 1/2" | 18 7/8" (47.9 cm) | 20 1/2" (52.1 cm) | 21 3/4" (55.2 cm) | 3" (7.6 cm) | 6 11/16" (17.0 cm) | 3" (7.6 cm) |
| BFS-2 / BFC-2 | Clamp or Swing Bolt | 150 (567) | 1/2" | 34 7/8" (88.6 cm) | 22 3/4" (92.7 cm) | 21 3/4" (55.2 cm) | 3" (7.6 cm) | 6 11/16" (17.0 cm) | 3" (7.6 cm) |
| BFS-3 | Clamp | 25 (95) | | 16 9/16" (42.1 cm) | 10 3/8" (26.4 cm) | | | | |
| BFS-4 | Clamp | 40 (151) | | 22 7/8" (58.1 cm) | 16 11/16" (42.4 cm) | | | | |

*Flow rates are guidelines only. Actual flow rates are based upon fluid, viscosity, bag type, micron ratings and other factors

Dimensions



Ordering Guide (Example: BFS-2SB-2-316-B)

| BFS - 2 SB - 2 - 316 - B | | | | | | |
|---|----------|------------------------------|---|--|---|--|
| MODEL | BAG SIZE | CLOSURE | PIPE SIZE | MATERIAL | CONNECTION ORIENTATION | GASKET |
| #1 and #2 Sizes | | | | | | |
| BFS = Stainless Steel BFC = Carbon Steel | 1 2 | C = Clamp SB = Swing Bolt | 2 = 2" FNPT (standard) 2F = 2" RF Flange 3 = 3" FNPT 3F = 3" RF Flange 2TC = 2" Sanitary Ferrules | 304 = 304 SS 316 = 316 SS 134 = 134 Coating over 304 SS* | Blank = Side In / Bottom Out 2 = Side In / Side Out | B = Buna N (Standard) E = EPDM S = Silicone V = Viton |
| #3 and #4 Sizes | | | | | | |
| BFS = Stainless Steel | 3 4 | C = Clamp | 75 = 3/4" FNPT 1 = 1" RF Flange 1.5 = 1 1/2" FNPT (standard) | 316 = 316 SS | Blank = Side In / Bottom Out 2 = Side In / Side Out (Hold Down Spring Recommended) | B = Buna N (Standard) E = EPDM S = Silicone V = Viton |

* Note: 134 Coating must have swing bolt closure and flanged connections.

Customization

Housings may be customized to meet your precise requirements. Contact Shelco's technical support staff or your distributor for more information.



Shelco Filters

100 Bradley Street
Middletown, CT 06457 USA

Tel: 800-543-5843 / Fax: 860-854-6120 / E-mail: info@shelco.com

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QUOTE

P.O. Box 8980
Fort Wayne, Indiana 46898
Phone: 260-497-9006
Fax: 260-497-9008
www.scscontracting.net

TO: Attn: Mike Devir
KERAMIDA Inc.
401 North College Avenue
Indianapolis, IN 46202
O:317-685-6600
C: (317) 363-5972

Quote Date: 11/30/2020
Quote # 20-240

| | |
|--|----------------|
| Location: | UNKNOWN |
| Duration: | 8 working days |
| Quote provided for conveyance line trenching and install. | |
| The below quote is based on the following terms, assumptions and conditions: | |
| <ol style="list-style-type: none">1. Quote assumes site is equipment accessible.2. Quote assumes SCS standard pay rates apply (non-union, non-prevailing wage).3. Quote assumes work will be completed during normal business hours, Mon-Fri, excluding holidays.4. Quote assumes no subgrade utilities are present.5. Quote assumes permitting maybe required to cross 1 gravel county road.5. Quote does not include electrician services or furnishing wire. | |

| QUANTITY | DESCRIPTION | UNIT PRICE | AMOUNT |
|--------------|--|-------------|------------------|
| 1 | lump Mobilization/Demobilization (Assumes with 3 hrs of Fort Wayne Office) | \$ 1,500.00 | \$ 1,500.00 |
| 8 | days Equipment & Labor-Excavate Trenches, Assemble Pipe and Backfill | \$ 2,200.00 | \$ 17,600.00 |
| 1 | lump Road Crossing Permit Allowance (Cost +15%) | \$ 1,000.00 | \$ 1,000.00 |
| 2000 | In ft 2" Sch 40, Bell Ended PVC | \$ 1.55 | \$ 3,100.00 |
| 2000 | In ft 2" Electrical Conduit | \$ 3.00 | \$ 6,000.00 |
| 6000 | In ft 1" Electrical Conduit | \$ 1.45 | \$ 8,700.00 |
| 1 | lump Miscellaneous Pipe Fittings | \$ 500.00 | \$ 500.00 |
| 20 | each Furnish Straw Matting | \$ 50.00 | \$ 1,000.00 |
| 1 | lump Grass Seed | \$ 300.00 | \$ 300.00 |
| 6 | nights Per Diem and Lodging | \$ 350.00 | \$ 2,100.00 |
| TOTAL | | \$ | 41,800.00 |

...your partner for success!

Michael J. Devir

From: Corey Fogle <CFogle@scscontracting.net>
Sent: Monday, November 30, 2020 5:06 PM
To: Michael J. Devir
Subject: RE: Excavation Estimate

8 working days, crossing an asphalt road would still probably fall within the quoted total, the permit allowance in probably quite a bit higher than it would needs to be.

Corey Fogle

cfogle@scscontracting.net

www.scscontracting.net | www.scscontracting.net

SCS Environmental Contracting, Inc. | P.O. Box 8980 | Fort Wayne IN 46898

Cell (260) 241-7078 | Office (260) 497-9006 | Fax (260) 497-9008



From: Michael J. Devir <mdevir@keramida.com>
Sent: Monday, November 30, 2020 4:13 PM
To: Corey Fogle <CFogle@scscontracting.net>
Subject: RE: Excavation Estimate

Corey:

How long do you assume the work will take?

See 6 nights per diem, but not sure how many guys to determine duration.

How much would cost change if had to cross an asphalt paved country road and not a gravel covered road?

Thanks

Michael J. Devir, P.E.

KERAMIDA Inc.

317/685-6600 (Office) • 317/363-5972 (Cell)

From: Corey Fogle <CFogle@scscontracting.net>
Sent: Monday, November 30, 2020 3:45 PM
To: Michael J. Devir <mdevir@keramida.com>
Cc: Fred Nichols <fnichols@scscontracting.net>
Subject: RE: Excavation Estimate

Mike,

Attached is SCS Quote #20-240 for the conveyance line trenching and install. Please let me know if you have any questions.

Thanks,

Corey Fogle

cfogle@scscontracting.net

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From: Michael J. Devir <mdevir@keramida.com>

Sent: Wednesday, November 25, 2020 5:10 PM

To: Corey Fogle <CFogle@scscontracting.net>

Subject: RE: Excavation Estimate

Corey:

How coming along on trenching estimate (conservative estimates are OK)?

Michael J. Devir, P.E.

KERAMIDA Inc.

317/685-6600 (Office) • 317/363-5972 (Cell)

From: Corey Fogle <CFogle@scscontracting.net>

Sent: Tuesday, November 24, 2020 8:49 AM

To: Michael J. Devir <mdevir@keramida.com>

Subject: Re: Excavation Estimate

Just to be clear each well gets 2" discharge, 2" and 1" conduit and 2-1" signal conduits?

Get [Outlook for iOS](#)

From: Michael J. Devir <mdevir@keramida.com>

Sent: Monday, November 23, 2020 4:11:59 PM

To: Corey Fogle <CFogle@scscontracting.net>

Subject: RE: Excavation Estimate

Good question..... For this exercise lets assume no road crossings or utilities.

Or give me an adder to cross one remote country road.

Michael J. Devir, P.E.

KERAMIDA Inc.

317/685-6600 (Office) • 317/363-5972 (Cell)

From: Corey Fogle <CFogle@scscontracting.net>

Sent: Monday, November 23, 2020 4:02 PM

To: Michael J. Devir <mdevir@keramida.com>

Subject: RE: Excavation Estimate

Crossing any utilities or any paved/concrete surfaces?

Special fill for pipe bedding?

Corey Fogle

cfogle@scscontracting.net

[www.scscontracting.net]www.scscontracting.net

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Cell (260) 241-7078 | Office (260) 497-9006 | Fax (260) 497-9008



From: Michael J. Devir <mdevir@keramida.com>

Sent: Monday, November 23, 2020 3:52 PM

To: Corey Fogle <CFogle@scscontracting.net>

Subject: Excavation Estimate

Corey:

Looking at a conceptual remediation project with 5 well locations, 4 which would be 500 feet in the 4 compass directions from the center well.

In total estimate 2000 LF of trenching to 3 to 4 feet depth.

Placement from center to each well - 2 inch discharge pipe, 2-inch and 1-inch electrical conduit, and 2x 1-inch signal conduits

Backfill, restore disturbed area.

Budget cost to excavate place pipe, backfill, restore? +/- \$5K works for this.

Michael J. Devir, P.E., CPESC

Senior Engineer

KERAMIDA Inc.

401 North College Avenue

Indianapolis, IN 46202

317/685-6600 (Office) • 317/685-6610 (Fax) • 317/363-5972 (Cell)

e-mail: mdevir@keramida.com www.keramida.com



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QUOTE

P.O. Box 8980
Fort Wayne, Indiana 46898
Phone: 260-497-9006
Fax: 260-497-9008
www.scscontracting.net

TO: Attn: Mike Devir
KERAMIDA Inc.
401 North College Avenue
Indianapolis, IN 46202
O:317-685-6600
C: (317) 363-5972

Quote Date: 10/30/2020
Quote # 20-225

| | |
|---|------------------------------|
| Location: | Greendale, IN |
| Duration: | Approx. 40 workdays(3 acres) |
| Quote provided for pond dewatering and backfill placement. | |
| The below quote is based on the following terms, assumptions and conditions: | |
| <ol style="list-style-type: none">1. Quote assumes site is equipment accessible.2. Quote assumes SCS standard pay rates apply (non-union, non-prevailing wage).3. Quote assumes work will be completed during normal business hours, Mon-Fri, excluding holidays.4. Quote assumes no subgrade utilities are present.5. Quote assumes permitting will be completed by others.6. Quote assumes there will be 2-4 weeks between dewatering and construction workscope.6. Quote assumes no soft material from pond base will be excavated or removed from the site. | |

| QUANTITY | DESCRIPTION | UNIT PRICE | AMOUNT |
|-----------------------|---|--------------|------------------------|
| 1 | lump Pond Dewatering and Construction Dewatering (Assumes 172,000 gallons pond capacity) | \$ 15,000.00 | \$ 15,000.00 |
| 22000 | tons Rip Rap Procure and Place (3 ft thick) | \$ 30.00 | \$ 660,000.00 |
| 100000 | tons 3.5 acres -Procure, Place and Compact Granular Fill and Geotextile Fabric | \$ 13.55 | \$ 1,355,000.00 |
| 1 | lump Erosion Control Measures (Silt Fence, Cut in Drainage Swale If necessary) | \$ 15,000.00 | \$ 15,000.00 |
| 4300 | tons 3.5 acres -Site Restoration-Place #53 Limestone | \$ 26.00 | \$ 111,800.00 |
| 3.5 ACRE TOTAL | | | \$ 2,156,800.00 |

*2-D6 wide track bulldozers & 2-60 to 72" Rollers

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